

Vol 5 No 3

The Australian

March

\$3*

COMMODORE and AMIGA REVIEW

6N \$3.00

Telecomputing 88

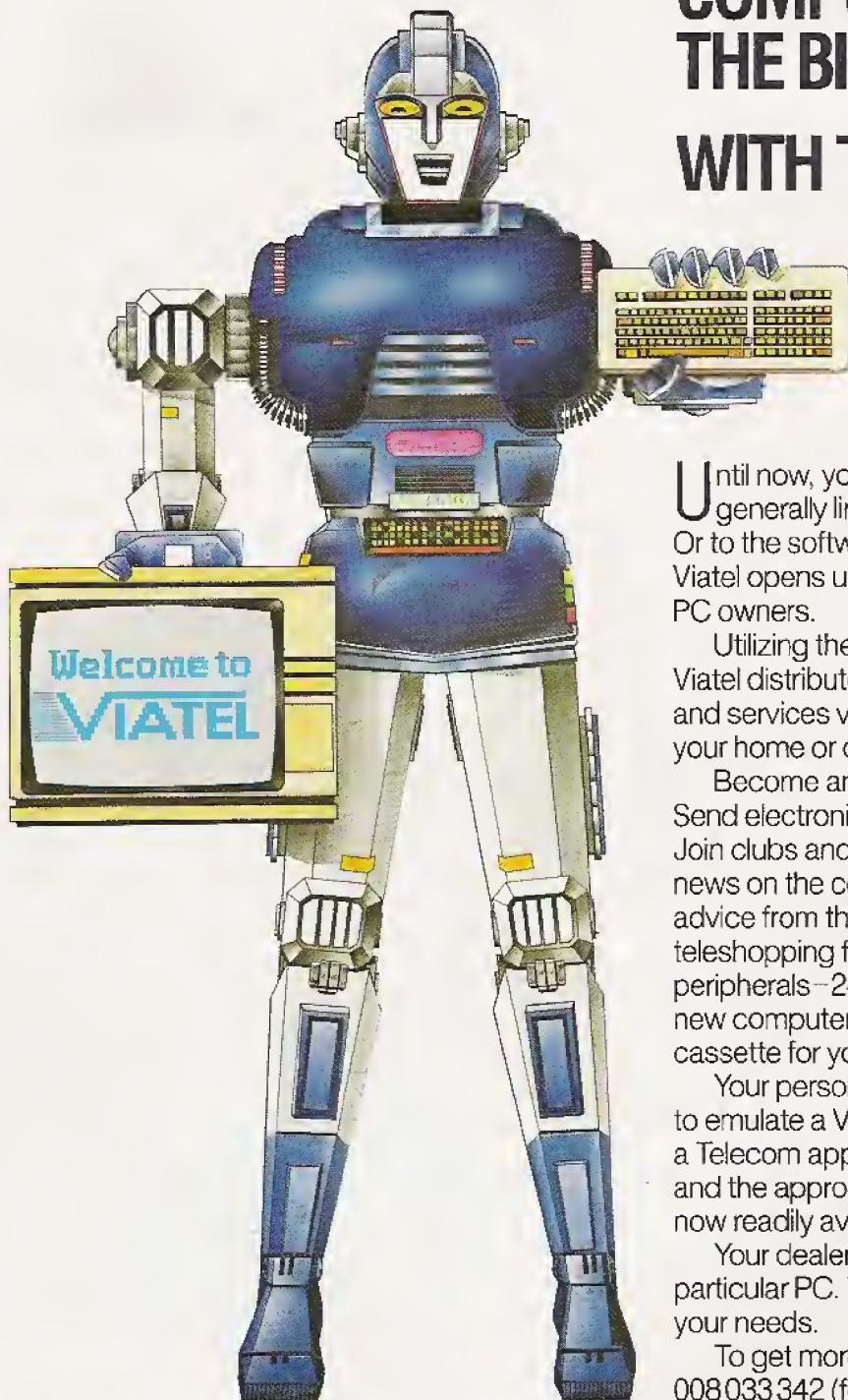
Chuck Yeager's
Advanced Flight Trainer



**Appointment Manager
Superbase**

**Arcade Action
Adventurer's Realm**

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The Australian Commodore and Amiga Review

Vol 5 No 3 March 1988

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Australian Commodore Review
21 Darley Road, Randwick, NSW 2031

Phone: (02) 398 5111

Published by: Saturday Magazine Pty Ltd.

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(02) 398 5111 or (02) 817 2509

Production: Brenda Powell

Layout: Amanda Selden

Subscriptions & back issues:

Tristan Mason (02) 398 5111

Distribution: NETWORK

REGULAR APPEARANCES

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Editorial

TRY AS they may, Commodore just can't kill the C64. I wish they would realise that and get back to the job of bringing out some of the great new products that their US offices distribute - like the 256K RAM expansion, and 1581 disk drives.

Sadly it just ain't to be. The extra RAM would cost too much to produce when coupled with the necessary extra power supply. As for the 1581, it too has been shelved.

Extra RAM would make GEOS a serious alternative to more expensive packages. No doubt the C128 version will be well worth the price. It also takes advantage of extra RAM, something which C128 users have long wished more software would do.

Meanwhile, back at the offices of *Australian Commodore and Amiga Review*, software is starting to pour in from all directions.

However one thing continually frustrates us. After so much has been said on the topic, I was disappointed to find that, in only two phone calls to leading BBS's, I still saw dozens of people adver-

tising pirated software for swap or sale.

Isn't it about time that sort of thing stopped? Aren't there any responsible sysops left? What happened to the days when advertising this sort of thing was taboo? Most message areas on some of the more popular C64 systems are simply swap clubs. Whatever happened to exchanging information about using the machine, not abusing it?

When they're not talking about the latest games that the nibble copiers won't back-up, it's time for name calling and backbiting. I would be the last to recommend some of the previously top class BBS's around.

However I can recommend the Fido-NET systems. Strict controls over message content are maintained. And the messages are worth reading, with all the latest information, some direct from the overseas software companies. Check out the article on FidoNET in this issue for a full explanation of this fast growing new area.

There's a complete listing of BBS's to call in your state, kindly provided by the Prophet BBS. We plan to provide



further coverage on this area over coming issues, with a closer look at specific systems in the various nets. Stay tuned.

Some suggestions for the big BBS's of yesteryear. Fewer mail areas, and tighter controls over what you publish, is essential. Electronic message systems are as much liable for what is transmitted over the telephone lines, as a newspaper is over the content of stories on the printed page.

The same applies to users of these systems. Don't clutter the message areas with a lot of trivial low level cat talk. Nobody will bother ringing systems that contain such nonsense. ■

Andrew Farrell

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Australian Commodore and Amiga Review

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Update



Ram rumbles

Revamped 1541

A NEW breed 1541 disk drive is now shipping. It's said to be a marked improvement over previous models. The new drive, called the 1541-II or 1541CR, has an external power supply. No doubt that should help with heat problems which often plague crowded desk arrangements. Further details available soon. ■

Commodore presidential appointment

COMMODORE HAS announced the appointment of a new president and chief operating officer in the US. Although there's no fooling around in this position, the man for the job was none other than a Mr Toy. Max Toy, to be precise. Coming from a background of top management positions at ITT, Compaq and IBM and a variety of marketing and sales positions, Mr Toy sounds well qualified to take on the hefty Commodore scene. He also has special experience in setting up distribution networks. ■

GeeBee Air Rally - C64

AMIGA CLASSIC hit, reviewed in this month's Amiga section, *Gee Bee Air Rally* is destined to be a hit on the C64 as well! Featuring 16 different in-air race courses, complete with 3D graphics, and increasing difficulty, the player is given plenty to keep him or her busy. The company behind this winner is Activision. To be released soon in Australia from Imagineering. ■

Geos-128

ADVERTISEMENTS ARE already appearing for the long awaited Geos-128

in US computer magazines. The official word from Commodore Australia is that it is currently under evaluation. Which means the product will be here soon providing they like it, and we know they like it. Until it's released through usual Commodore channels, a few larger dealers have managed to import limited quantities, so ask around. ■

Seat-of-the-pants flight simulator!

ELECTRONIC ARTS' *Chuck Yeager's Advanced Flight Trainer* is out and selling in big numbers. It's the only flight simulator co-designed by one of the greatest test pilots ever. The action is said to be fast, with a selection of 14 different craft to fly from the WWI Sopwith Camel to the mach-speed SR-71 Blackbird.

No height restriction either. You can take the Blackbird right to the edge of space. Sound fantastic, and the graphics look fantastic. Check out the review elsewhere in this issue. Distributed in Australia by ECP. ■

1571 short supply

QUANTITIES OF the 1571 disk drive are way down, with rumours already abounding that production is likely to cease in the wake of several new disk drives to be released by Commodore. Whilst that cannot be substantiated, the reason for the low supply seems logical. With most purchasers selecting the C128D, few of the units are being shipped.

Saludad *Amigo's

Why, you ask yourself, is this Update person pretending he knows Spanish. Well, the answer is that I wanted to attract the attention of *AMIGA owners (and I'm not too good at English either).

Pactronics has finally decided to follow the lead of those intelligent computer users who decided that the Amiga was the right computer for them. We have begun to distribute new products for the Amiga, and as usual they are top quality products at great value prices. Here is a bit of information about a few of them:

- Textpro** — A full function Word Processor. Pull-down menus customize keyboard to suit. Merge IFF format graphics right into your documents. Customize printer drivers.

- Dataretrieve** — Fast large capacity database. Pull-down menus. Help screens. Unlimited data fields. 2 billion characters.

- Assempro** — Fully integrated editor, fast macro assembler and much more.

And some great books - *Amiga for Beginners*, *Amiga Tips and Tricks*, *Amiga Basic Inside and Out*. For further information please see our ad on page ???.

And for those of you who may have upgraded to IBM Compatibles, let me remind you that Pactronics is now leading the way with competitive educational and business software, as well as Joysticks, Joystick Cards, etc.

For Geos people

You may or may not know that we have a book and software called *How to Get the Best out of Your GEOS*, and also a GEOS Driver for your NEOS Graphics Mouse. Well, we now have a program named *Becker Basic* for GEOS which allows you to write your own programs in GEOS for Basic.

ADIOS AMIGOS

P.S. Look out for our new SESAME STREET Educational software

However, we think that once GEOS-128 hits the streets, demand for external drives will increase. ■

Software experts pull out

SEVERAL INDUSTRY experts are moving out. That's the official word from two leading software experts in the C64 market. "Piracy has gotten too much, we just can't make any money these days ..." said one software company. Many other areas of the computer market are opening up, providing fantastic opportunities for talent from the games industry - which will soon be non-existent in Australia. Some users still insist it will never happen! ■

Super-Hang-On from Electric Dreams

OFFICIALLY LICENSED from Sega, Super-Hang-On is a great motorcycle racing game: the thrills are so real we considered making a helmet compulsory! Featuring four skill levels and four music tracks, push your turbo charged racing machine into 48 progressive stages racing across Asia, Africa, America and Europe. Available for the C64 RRP \$29.95 C, \$39.95 D. ■

Get on the right track with Championship Sprint

FOLLOWING ON from Activision's superb coin-op conversion classic, Super Sprint, comes *Championship Sprint*.

Now you can have all the thrill and excitement of the original, plus the ability to customise and vary your own track!

Try endless possible combinations as you design crazy circuits to suit your mood. You can make them as easy, or as difficult as you like, adding oil spills, tornadoes and traffic cones just to spice things up a bit.

Championship Sprint really is high class racing at its best - (and with a little more thrown in).

Special Features:

- Up to four circuits can be designed at one time.
- Thousands of possible track combinations.
- Add your own hazards.
- jump ramps, short cuts, gates.

Available for the C64 RRP \$29.00 C, \$39.00 D. ■

WA Computer' 88

COMPUTER'88, WA's only computer exhibition, is back, bigger and better than ever.

More than 50 companies from all over Australia will be exhibiting this year, including IBM, Epson, Mitsubishi, Ipx and all the major manufacturers represented by their dealers.

From May 5-7, experts and people interested in computer technology will once again have the opportunity to view the latest computer products and designs all under the one roof.

There will be something for everyone with the newest computers, visual display equipment, software, printers, data storage and communications equipment on display.

Computer'88 will be held at the Perth Entertainment Centre with May 5 and 6 being business and industry days and May 7 a family day. ■

GOSCOM Gosford Commodore User Group & East Coast Amiga

The friendly groups on the NSW Central Coast.

For more information on meeting times and dates phone (043) 23 2179 or (043) 41 8140.

Westpac introduces security system on a credit card

A SECURITY system on a credit card will be introduced by Westpac in April.

A "smart card" will give its business customers additional security to access their Deskbanks electronic funds transfer system from their offices.

Developed in Europe and distributed in Australia by Honeywell Bull, it will allow these clients to have complete control over who can access company information. The system also offers multiple levels of authorisation.

The Deskbanks smart card is essentially a personal computer on a plastic card. It has the same dimensions as a credit card but with a microcomputer embedded in it and, if required, a standard magnetic stripe across the back. This microprocessor accesses secure data stored in the memory of the card. ■

Compucovers by Caprina

CAPRINA manufacture covers for computers, all office and factory equipment. Because products are locally made to order any size machine or instrument to be covered. The material used is a high quality brushed, cotton backed vinyl, which is waterproof, anti-static, non-scratch and heat dissipating which enables immediate use after equipment switch off - the cover can be cut to accommodate ventilation. It is guaranteed to outlast the system. ■

Disk care

IDEAL FOR transporting disks, the new Disk Pac, distributed by Caprina. It's a flat clutch bag for 3.5" or 5.25" disks, capacity for 10 or 20. The Disk Pac is made from a hard but flexible material incorporating an aluminium shielding which gives protection from x-ray machines and the sun's ultra-violet rays. It's also anti-static and water resistant. Ideal for mailing purposes too! ■

CRACKER CHIP 32

For C64, 64C & SX64

You never fail until you stop trying, and all good things improve with time. These are the mottos followed by the authors of MEGAROM V3.0 and hence comes their latest, most ingenious programming feat, backed by a money back guarantee! Check out the unmatched facilities:

- * One of, if not, the most compatible, reliable, and fastest serial loader available for the C64, loading on average 6 times faster than normal.
- * Fully comprehensive dos wedge V6.0 incorporating un-new, directory pause, directory stop, and load from directory listing etc.
- * Now can be used with RS-232 i.e. modems etc.
- * Access machine code monitor at the flick of a switch with all the features you need including scrolling in both directions. More than 20 commands in total.
- * Stack Capture will transfer the hardware stack from \$0000-\$0800 to \$1000-\$1800 completely untouched, for later analysis.
- * NMI Copiers will not copy the latest "stack protected" programs. Cracker Chip does!
- * Memory Copier will copy the full 64K of RAM to disk in 2 files in less than 40 secs.
- * Custom Copier will copy any RAM that you specify between \$0800 - \$CFFF to disk in one file, at turbo speed. All files saved in non-compressed format.
- * Graphics Grabber will capture any Multi-colour, Bit Mapped or Hi-Res screens to disk including sprites. Screens from anywhere in RAM can be saved.
- * Utilities on disk include Sprite Editor, File Copiers, Disk Back-up, Bootmaker, Graphics Slideshow, and over 170 popular program entry-points and cheat pokes!
- * Comes complete with detailed manual on how to back-up (crack) programs manually just like the pro's do! All is revealed in this easy to follow manual.
- * Update your old Mega-Kernal, or Mega-Rom to the Cracker Chip 32 for just \$18!

All this plus more for ONLY \$69.00 + p&h

BLAZING PADDLES

- * A fully icon/menu driven graphics package that will work with joysticks, mice, graphics pads, trackballs, etc.
- * Multi-featured software includes - Range of brushes - Airbrush - Rectangle - Circle - Rubberbanding - Lines - Freehand - Zoom - Printer Dump - Load/Save - Advanced colour mixing with over 200 hues - Cut and Paste allows shapes/windows/pictures to be saved.
- * Pictures can be saved from A/Replay and edited with B/Paddles.

Complete Blazing Paddles & Mouse \$99.00

Blazing Paddles \$39.00

DIGITAL SOUND SAMPLER

- * The new Sampler allows you to record any sound, digitally, into memory and then replay it with astounding effects.
- * Replay sounds forwards/backwards with echo/reverb/ring modulation etc.
- * Now with full sound editing module to produce outstanding effects using full 8 bit D to A and A to D conversion.
- * Live effects menu includes real time display of wave forms. Also includes powerful sequencer with editing features.
- * Load/Save up to 8 samples to/from memory on tape or disk.
- * Line in/mic in/line out/feedback controls. ONLY \$129 + p&h

SMARTCART 8/32K

- * Battery backed RAM for up to 5 years that acts like ROM.
- * Make your own cartridges including autostart types without an EPROM programmer.
- * Simply load the program you require then flick the switch - Now the cartridge can be removed just like a ROM cartridge.
- * Can be switched on or off via software. I/O 2 area open for special programming techniques. Some knowledge of M/C is helpful but full instructions are provided.

ONLY \$49/\$99 + p&h

CARTRIDGE DEVELOPMENT SYSTEM

- * All the necessary parts to produce an 8k/16k auto-start cartridge.
- * Top quality PCB - Injection moulded case - Reset switch - EPROM
- * Comes complete with "Cartridge Handbook" giving full details and tips on building and configuring the cartridge for many uses. ONLY \$49 + p&h

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\$25 for a pack of 25 disks

5.25 inch disk box lockable holds 100 \$19

5.25 inch disk box lockable holds 120 \$22

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KRACKER JAX REVEALED

Book II

Learn about copy protection from the experts

The knowledge of protection schemes has made many famous. We can pass that knowledge on to you! We can pass that knowledge on to you! Kracker Jax Revealed Book II is the latest release in a series of tutorial guides designed to instruct you in the fascinating areas of copy protection schemes and how to defeat them.

Book II continues the tradition which began with Book I. With nothing more than a basic grasp of machine language, you can learn to control some of the newest, most advanced copy protection routines on the market today! Here is what you'll get with Book II.

- * Detailed info using 20 current new programs as examples.
- * An enhanced all new utilities disk with 20 new parameters.
- * The famous Rapid Lok™ copy system revealed!
- * Extra bonus - The legendary HES MON™ Cartridge!

Don't be intimidated by complex protection routines. Learn how to take control of your expensive software. After all, KNOWLEDGE IS POWER.

BOOK I is still available

ONLY \$49 each + p & h

ACTION REPLAY MKIV

THE ULTIMATE BACKUP FOR C64/128

Action Replay Mk IV is more powerful, friendlier to use, and will backup more programs than any other computing utility . . . Guaranteed! No matter how it is loaded, once it is in memory, Action Replay will freeze the action giving the user access to Hi-res/Multi colour screens, Sprites, memory locations for Cheat Pokes, Sprite collision disable and backup to tape or disk at normal or Turbo speeds. Other features include; Sprite Monitor, Fast Format, Warp 25 Disk Turbo, Warp 5/10 Tape Turbo and Snapshot reload independent of the cartridge. Fully compatible with C64, 64C, C128, 128D, 1541, 1541C, 1570, 1571 and any true CBM compatible datasette or disk drive.

Fantastic Value at \$99 + p&h

ACTION REPLAY MKIV PROFESSIONAL only \$119 + p&h

DEEP SCAN BURST NIBBLER

- * The most powerful disk nibbler available anywhere at any price.
- * Disk Nibbler gets its power by implementing a parallel cable which transfers raw GCR Data to and from the disk drive without doing any decoding so you get a perfect copy of the original.
- * Will nibble up to 41 tracks - Copy a whole disk in under 2 minutes - Easily installed - Regular updates - Full CR 1/2 tracks - Full instructions - Cable has user port extension - Dolphin DOS compat.
- For 1541, 1570 and 1571 NOT FOR 1541 C
- * No better product for making protected backups. ONLY \$79 + p&h

256K SUPEROM EXPANDER

- * Now you can select from any of 8 8-32k eproms instantly!
- * On board operating system - select any eprom from the main menu.
- * On board unstoppable reset.
- * Unique EPROM generator will take Basic or M/C programs and turn them into auto start EPROMs. ONLY \$99 + p&h

EPROMMER 64

- * A top quality, easy to use EPROM programmer for the 64/128.
- * Comes complete with instructions - plus the cartridge handbook.
- * Fully menu driven software/hardware package makes programming reading/verifying/copying EPROMs simplicity itself.
- * Will program 2716, 2732, 2764, 27128, and 27256 chips at 12.5, 21, or 25 volts. Fits into the user port.

ONLY \$139 + p&h

3 SLOT MOTHERBOARD

- * Accepts 3 cartridges - individually switch any slot in/out.
- * Fully buffered for cartridge port - On board safety fuse and Reset.
- * Includes table stand-off, all mounted on high grade PCB. ONLY \$49 + p&h

TATTS 45II

If you want to share part of the \$300,000,000.00 that is won each year in Tattslotto, then this program is for you!

TATTS 45II is a completely self-contained program incorporating 6 sub programs which are used to perform a complete statistical analysis of the numbers you have chosen against past results. By following the guidelines as laid out in the 14 page manual accompanying the disk, you can select the higher chance numbers by analysing the number sequence history and repetitive groupings, thus improving your chances of winning. This program contains records of all past results since draw # 413 and can be expanded to cater for future changes to Tattslotto eg. 6 from 48 etc. All up, over 30 screens of statistical and analytical data are provided, plus much, much more.

ONLY \$49.00 plus p&h

BLUE PARADE

This package really packs a punch! 2 double sided disks contain some of the raunchiest Hi-res animated cartoons and digitized screens, accompanied by exciting synthesised tunes such as 'touch me'. This electric bazaar is a must for any collection.

ONLY \$29 plus p&h

*All mail order clients must include a signed and dated statement for declaring that they are over the age of 18 years.

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100% GUARANTEED 1541 COMPATIBLE DRIVE

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- * Direct drive motor
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- * All cables included
- * Dimensions 268x150x47mm

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OF COMMODORE AND AMIGA PRODUCTS

LETTERS

TO THE EDITOR

What about the C128

I am discontinuing my subscription. The amount of information you publish on the C128 is so minimal, it is not worthwhile.

Perhaps you could reflect that those who have learnt on the C128, and only desire to program, have no wish to go 64 and learn another more difficult language.

You further complicate the issue by now including Amiga. Of no use to those who can't afford one.

Could I suggest that a three monthly magazine specialising in either 64, 128 or Amiga would find more favour.

K.L. Padman
Soldiers Point, NSW

Ed - We feel that by covering all Commodore machines we are serving the interest of all our readers, in fact many own two or three machines.

However, we feel that we have neglected the C128 and are making considerable efforts to remedy this - see our next issue.

Device Switch

Recently I decided to use the hardware method of changing the device number of my 1541 disc drive to device 9 (jumper 1a). According to the instructions in the 1541 user guide, a relatively easy task!

Upon removing the cover I cannot find the device number jumpers as described in the manual.

Have they updated the disc drive

and not the manual?

Can anyone help me with a description or possibly a diagram?

Also I would like to say that your magazine is improving with every issue. Great value for money.

Bill Endrizzi
Red Cliffs, Victoria

Ed - Check out the January issue, there is a do-it-yourself guide to building a device number switch.

If this is too complicated to do yourself try call Microcomputer Spot on (02) 477 7098 and they will organise it for you.

Destruction of magazine

On deciding to subscribe, I looked for the subscription form, only to find it attached to the book, I looked for more forms in the 1988 Annuals, but found either the contents, reviews or reference material on the reverse side. A closer look revealed that nearly all the cutout forms for subscription, information and ordering etc, were the same. Not to mention the destruction to the 88 Annual covers for information on Commtrain. For other people cutting up the magazine might not worry them, but they mightn't worry about keeping the magazine either, I sure do.

Your Amiga Annual is the reason I purchased the Amiga 500 and monitor. I was not thinking of buying an Amiga at all until I read about it in the Christmas issue I bought for the first time to read up on Commodore, for my 64. The in-

formation I wanted to know before I decided to buy the Amiga, I could not find in the brochures or other magazines.

After purchasing the Christmas issue and the two 1988 Annuals I have learned more about what's happening on the computer scene than I ever have. I find your magazine valuable reading and reference material, and thank you all for a great Australian magazine.

Stephen deBomford
George Town, Tasmania

Ed - Perhaps a photo-copier would help you preserve your magazines. We have also had words to our production team to try and place the coupons in places less essential.

Amiga vs Atari

I read with interest your article in the September Issue; "Amiga vs Atari".

I do not have a computer but am interested in music software and will buy whichever machine best suits my needs. I would actually prefer to purchase a PC but can find no reasonable software. Back to the Amiga vs Atari. Here is the current situation.

A dealer that sells both Amiga and Atari recommends:- Atari with *Music Studio* (\$70) software. A major dealer (Myers) of both machines recommends Amiga with *Deluxe Music* (\$250) software. The music store recommends Atari with *The Copyist* (\$650) plus *Mr T* software.

What I want to do is :-

- a) write scores and print the music for members of a band.
- b) Enter the notes onto the stave directly from a keyboard attached to the Midi. This is again to be used to print out scores for band members.
- c) Built compositions from "recording" single tracks.

The computer will also be used for word processing, list processing and games.

Can you please advise?

Frank Verrall
Seacliff, SA

Ed - We recommend the Amiga without hesitation. There are a variety of music programs available, apart from those you mentioned. Check out the Amiga Annual for a complete rundown. Sonix probably offers the most power as far as creating your own sounds. Deluxe Music is the better for writing and printing scores.

Problems

I was wondering if you can assist me with a query I have regarding the 1526 printer and the GEOS program.

Do you know if Berkely Software have released a driver program to suit the 1526 printer?

I would ring Commodore in Sydney for information only I value my sanity too much, having wasted some considerable time and money a couple of years ago seeking help, only to be told that it was my fault for buying their programs that were not compatible with their products, ie 1526 printer.

I'm sure that I am not the only one who has found that GEOS is not compatible with the 1526 or most other programs as your Disk Magazine No.5 (which I have) has the emulators for *Doodle* and *Print-*

shop.

I have asked a couple of dealers locally but they are retailers only and unless it's printed on the box they are not very much help, although they say that the next time they see the traveller they'll ask.

G.F. Shannon
Rydal, NSW

Ed - Don't hold your breath, it's very unlikely.

Final Cartridge

I wish to thank you for the review of The Final Cartridge for the C64/128 computers. I had been looking around for a popular cartridge that had a) a fast loader routine and b) a reset button. The Final Cartridge having these and other useful features fitted my needs perfectly.

After reading your review I went out and purchased the cartridge and have been quite satisfied with its performance.

I have just one question though. As far as I understand the reset switch works by physically grounding the computer. In theory then, the computer should reset no matter what state it happens to be in. Yet some commercial software, mainly games, remain unaffected by the reset button. How then, does the software overcome the physical reset by The Final Cartridge?

Mark Trenery
Farrer, ACT

Ed - After a reset the computer executes a special power-up sequence, which includes checking for a cartridge at \$8000. By placing a machine code program, and cartridge identifier bytes at the appropriate memory locations, the computer reset is taken back over by the commercial program.

Chips

Could you please tell me where I can get (2) chips for my MPS 803 printer?

The numbers are 54567. There are four of these in the unit - I require two only.

JC Schliff
Brooweenya

Ed - Try contacting the main Commodore branch, Parcom (07) 395 2211 in Qld. They should be able to advise you as to the location of the chips.

Horseracing, Trots or greyhounds Winners galore

With our new race tipster a unique powerful easy to operate selection system you respond to a number of questions and the Race Tipster will find the horse with the most chances of winning. Points for all runners are shown on screen.

Disk or tape \$39 post included.

The Race Selections

Analyser—A program which will allow you to bet up to 3 runners in a race. (Similar to the popular Dutch book) The computer will show you how much to bet on each runner (\$1 units) and display all investments and dividends.

Disk or tape \$39 post included.

The two power programs \$59

Our book **Treasure Chest** for C64/128 is still available. It is a compact and handy guide full of unusual programs, sub routines and programming hints. Learn to use POKE PEEKS USR SYS and other tricks by the book and get free Lotto Analyser, Typing Tutor or Maths Tutor on disk or tape.

Price of book \$23 post included.

For details of book contents or racing programs send your stamped and self addressed envelope (large) without obligation. Please send cheques or money orders to:

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Chuck Yeager's Advanced Flight Trainer

When it comes to flight simulators, you'd think the C64 had done its dash. Now there's another with a difference. This baby was co-produced by one of America's greatest test pilots ever. The end result is impressive. Andrew Farrell parachuted back to earth for this review.

WHAT'S Chuck Yeager? He's the first man ever to travel faster than the speed of sound. He carried out that amazing feat on October 14, 1947 strapped aboard the experimental Bell X-1 rocket plane.

In his *Advanced Flight Trainer*, by Electronic Arts, you too can experience the thrill of flying a jet aircraft. If the pace sounds too hot, you can also relax in a Cessna, and just take in the scenery.

However, this simulation is really for speed freaks and precision flyers. It's fast. Mach III plus. And there's formation flying, air racing, and slalom courses to test your every nerve.

Plug your joystick into port two, and strap down. The program begins, after the usual title screen, with a six option menu. All the menus are pop up windows, with selection carried out using the joystick and fire button.

To get a quick taste, I selected intro flight and sat back waiting to be stunned speechless. After *Flight Simulator II*, this was a refreshing change. I speak here of the C64 version only, the Amiga's smooth

graphics and realism snap onlookers to attention faster than any other program.

Advanced Flight Trainer is good, al-

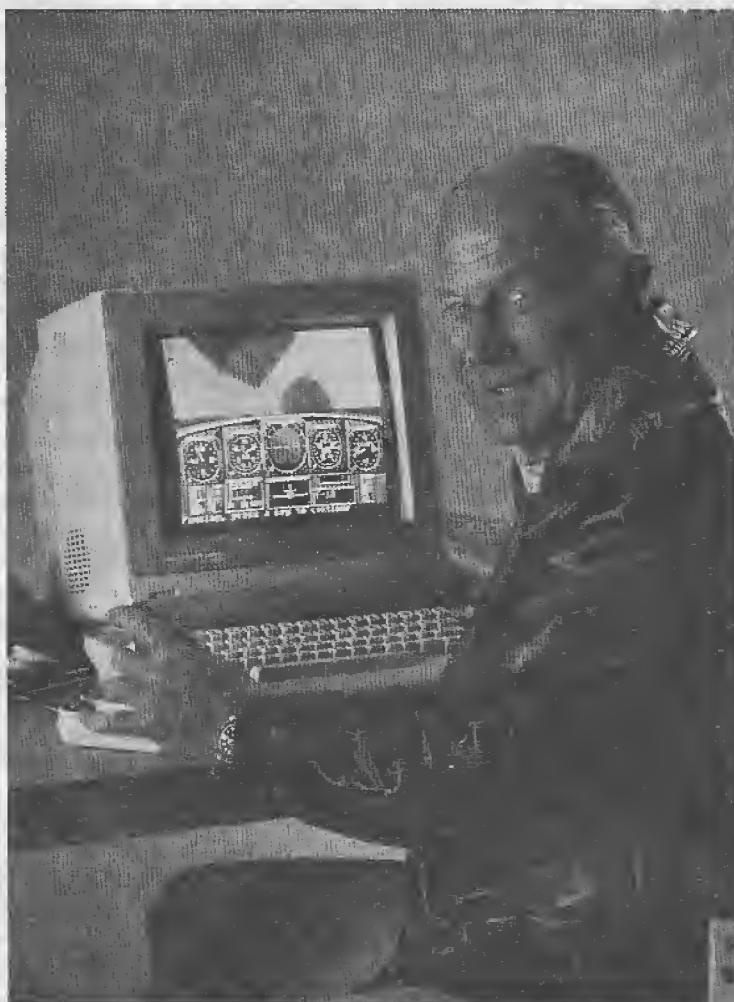
teristic of jet propelled craft.

If you've ever wished you could fly upside down and stay there, this is the way to go. The intro flight is stunning. Imagine winding your way between a series of massive towers in an XPG12, and you've got the liquid hydrogen equivalent to the Olympic ski run at Perisher.

My appetite was whet. Now for the real thing. Next on the menu was test flight. From here you ride any one of fourteen different craft to their very limits. I chose the Lockheed SR-71, a supersonic reconnaissance jet that goes right to the edge. And that's just what I did. After a quick take off, I eased the stick back a touch, and selected 100% power.

The horizon dipped out of sight, and the sun swung into view. After a few seconds the clap of the breaking sound barrier was heard. A quick roll, for a look at the view, and then straight back to my climb. Soon the sky turned black. I had reached the edge - 80,000 feet above sea level.

Not content with that, the next step was to put her in a dive and see what sort of speed the SR-71 could really do. Nose down, throttle still way up, the altimeter raced towards zero and the speed just kept



though there is little ground detail. The intro flight demonstrates well the super-tight handling and instantaneous reaction to slight stick adjustments that is charac-

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Telecomputing 88

Forget the rest, FidoNet is the best! Networking its way across the continent comes a new sound in Electronic Mail. Now you'll hear the Bulletin Board systems dialing each other in the wee small hours, swapping secrets and exchanging gossip. How did this new revolution all start? Andrew Farrell downloaded this report.

LIKE THE drums of an ancient tribe deep within Africa, echoing messages from one mountain post to the next, so too, FidoNet beeps an electronic tune from system to system.

There's nothing new about the idea. In fact, the concept was discussed locally at great length many times in years gone by. Little did we know what was in store.

At last a plan was forged and today is in full swing. To pass a message from one side of Australia to the other, electronically, by a series of repeater stations. Each with the ability to post new information, as well as allowing users to access existing material.

Early days

It all started in the US about four years ago. The original setup was simple, but it worked. A Bulletin Board written by Tom Jennings' was required, and the name FIDO conceived by the same man. At first, one huge network existed, all busily swapping messages at night. Eventually the number involved became unmanageable, and other smaller NETS were arranged, supported by an update in the system software.

Fido BBS software made its way to Europe and Australia via public domain software collections. Soon networks were operating in both these areas, with the European Network being linked back to the US.

Downunder, things were happening. A small group in Melbourne, and another unrelated group in Sydney which eventually did link into the US based net.

Melbourne and Sydney linked in the second half of 1986, and today some 75 different systems are operating spanning every state, and the ACT.

Getting caught in the net

To access these systems, you don't need anything out of the ordinary. In fact, possibly BBS's that you already frequent have a FidoNet area. An ANSI or VT100 emulator will provide a display as intended by the makers, in colour and with formatting. However, this is not an essential element. Any good terminal program, a 300 baud modem and your favourite computer.

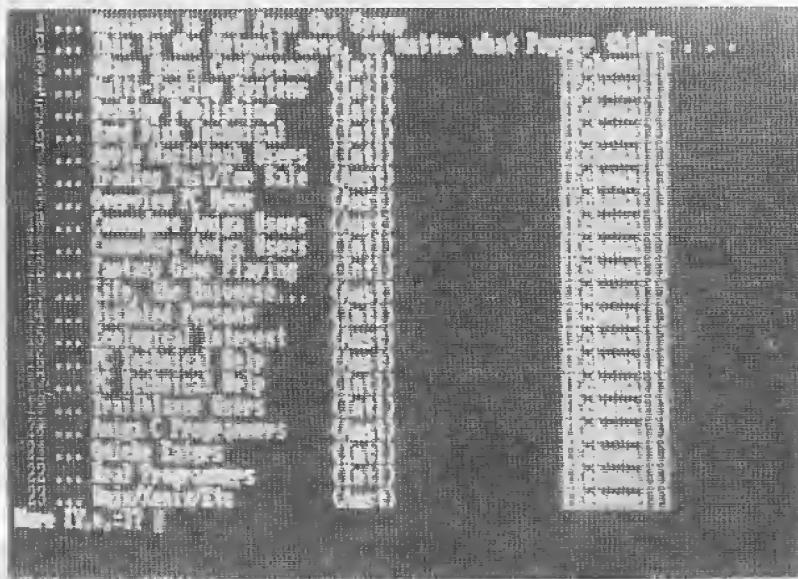
At the end of this article you'll find a list of FidoNet systems in your area. Most support the higher baud rates as

well as the usual slowcoach speeds. If you plan to download programs or articles, or maybe even upload (bit of give instead of take) the odd piece, you can use XModem, Ymodem, SEALink, or SuperKermit or even Zmodem are also supported and work better. If these words mean nothing to you, see the glossary at the end of this issue.

Once you're in

Take care. You're now on a public broadcast system. Your ideas will be spread far and wide, in a mere matter of days.

There is a large amount to read, on many different topics. FidoNet allows for many topic areas or special interest groups (SIGS), and these may be pursued individually. Not all are offered on



every system, but generally you'll find a good number to choose from.

This is only one of the two possible message types which traverse the FidoNet. Both types move in the same way, but each is used and accessed differently.

Netmail is for person to person communications. *Dear Jane, please don't bother to Netmail me again, I'm not your sort of guy.* That sort of thing. If it's private, or important, and you want to know the receiver got it for sure, that's the way to send your message. It's just like the normal public mail system, only probably more reliable.

To use it you must first know a bit about FidoNet's address system. Australia Post are very fussy about post codes. FidoNet also has a string of numbers which take on a special meaning, and help mail arrive at the intended address.

Layer upon layer upon ...

Like any good adventure game, FidoNet has many levels or layers. At the lowest level is the node, which is in essence a single BBS supporting the FidoNet. Several nodes, usually about ten, form a net. Nets join together to form a region, which is simply for administrative purposes, rather than mail handling.

Regions join together to make a zone. It's all a bit like the postal system. Each post office (a node), receives incoming mail and places it into the relevant post boxes (users accessing an individual system). It is part of a small area, or postcode grouping for mail sorting purposes (region). This in turn is part of a state mail network (zone), which fits into the entire national mail network (FidoNet).

To send mail to a specific system, you must know its unique address, which describes where it fits into the whole scheme of things. A FidoNet address might look like this :

3:711/403

The first number, in this case three, tells us in which zone the system is located. Zone three covers Australia, including the entire Western Pacific area.

The next three digits are the net. 711 is 'Sydney North' net.

Node 403, the next three digits, is the 'Software Tools' BBS.

To send a message to a specific person, you'll need to know which node they access. You can then send the message there, addressed to the appropriate user, and next time they access the system, they will be notified that mail is waiting.

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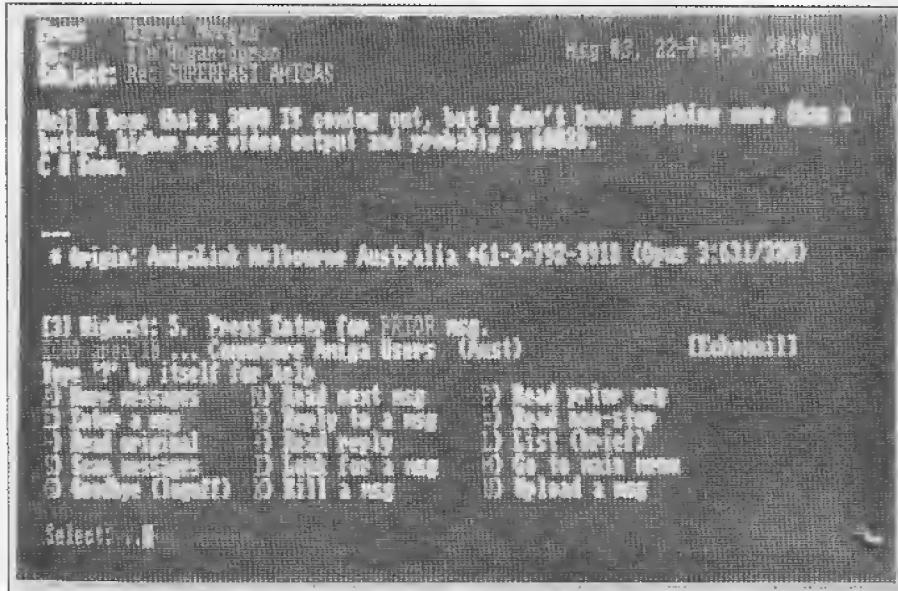
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To find out who is on what systems, you need to read the other type of mail called Echomail. At this time, there is no quick way of finding out who visits which BBS's. So this is the best way to meet those that frequent the topic boards of your interest.

Echo mail..mail..mail..

At first there was only Netmail. Then in Dallas, sysops (system operators not sys as in nice, but sys as in kiss) discussed the idea of sharing their own message areas via Fido. Jeff Rush took the idea to the Echo-mail stage, allowing messages on particular topics to be shared amongst many FidoNet systems.

Those BBS's with message areas about the same topic would swap messages. For example, if you accessed a system that had an area especially for Amiga users, a similar system on the other side of the country may have a similar message area. Messages that you leave would, in a matter of days, reach all

systems that maintained a similar area.

The concept works brilliantly for fault finding and fact hunting. A question placed on one BBS soon spreads Austra-

before long the news will be hitting the fan all over the country.

In total there are some 100 different Echomail conferences running around the world. A few go to nearly every system, many go to a good number, and a fair few are limited to just local regions or zones.

The whole echoing process is automatic. There's no need to check dozens of systems for an answer. However, at the same time, take care, because echo-mail is not private, and falls into the category of electronic publishing.

Starting your own FidoNet BBS

You'll need software, and a fast modem. Try the Trailblazer. You'll also need a IBM PC, since that is what the most popular system software called OPUS runs on. For the best up to date information I suggest you contact your nearest FidoNet node operator and avachat to him or her.

Conclusions

Now the base brass facts. I've had a lot of glitches using FidoNet. Locally echoed Echomail boards seem to work fine, but it seems many messages are garbled that have travelled any great distance. A problem that we may see overcome as modem and telephone line quality improves. But it can be a regular pain in the proverbial.

Echomail boards are the way of the future for BBS operators. Stay out, and before long you're in the dark, in your own little world. Perhaps soon we will see system software for the C64, or Amiga. Stay tuned. Until then, why not give one of the systems mentioned below a call. You can't lose. ■

Communications glossary

ANSI—A terminal protocol.

Download—Transfer of files from the host BBS or terminal to the guest terminal.

Protocol—The format by which information is sent through the telephone system to minimise errors.

SEAlink—A downloading/uploading protocol.

SuperKermit—An enhanced version of the Kermit protocol.

Upload—Transfer of files from the guest terminal to the host terminal of BBS.

VT100—Another protocol that allows coloured text and formatting.

X-modem—This is a protocol that is used during uploading/downloading that uses blocks of 128 bytes.

Y-modem—This is a protocol that is used during uploading/downloading that uses blocks of 1024 bytes.

Z-modem—This is a new style of protocol that doesn't stop sending until an error has been detected; this cuts time to a minimum.

lia wide, and before too long an answer should filter back through the system.

There's no need to worry about the address you want the message to end up at. Just post it at your local BBS, and

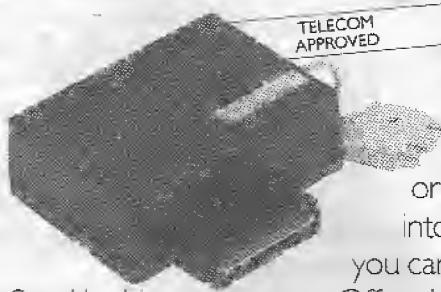
Mathematical Error

The Mariner 1 space probe was launched in 1962 towards Venus. After 13 minutes' flight a booster engine would give acceleration up to 25,820 mph; after 44 minutes 9,800 solar cells would unfold; after 80 days a computer would calculate the final course corrections and after 100 days the craft would circle the unknown planet, scanning the mysterious cloud in which it bathed. However, with an efficiency that is truly heartening, Mariner 1 plunged into the Atlantic Ocean only four minutes after take off. Inquiries later revealed that a minus sign had been omitted from the instructions fed into the computer. "It was human error," a launch spokesman said. This minus sign cost over \$10,000,000.

Pi

Pi is a mathematical constant which is the ratio of the circumference of the circle to its diameter. It is a never-ending number and, for most calculations, is taken to its third decimal place (3.142). However, in 1897 the General Assembly of Indiana passed a bill ruling that the value of Pi was 4. This ensured that all mathematical and engineering calculations in the state would be wrong. It would, for example, mean that a pendulum clock would gain about fifteen minutes every hour! ■

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Microtex 666 goes from strength to strength

AUSTRALIA'S most popular Viatel service, Microtex 666, is better than ever: its database of information and activities for members is now a massive 35,000 frames covering everything from games programs to Bulletin Boards.

But before we tell you more about this whiz bang stuff here's a quick background explanation for anyone out there who doesn't know what Viatel and Microtex 666 are.

Viatel

Viatel is the national videotex service run by Telecom and accessible from your Commodore computer with a modem and telephone. Organisations called service providers (SPs) use this medium to supply information ranging from the serious (for example, stock prices) to the whimsical (such as games).

The largest SP on Viatel is Microtex 666, a subsidiary of Computer Publications, the publisher of *Australian Personal Computer* magazine and *Computing Australia* and *PC Week* newspapers.

Interestingly, although Microtex 666 can be accessed from most kinds of PCs, the bulk (75%) of its members are Commodore 64 and 128 users.

Telesoftware

Microtex 666's offerings span a wide gamut of interests. To start with, there's the Telesoftware section which lets members choose from about 1500 programs and download them for their own use.

These cover all sorts of things with the most comprehensive section being the entertainment one because most folk want games in preference to anything else.

The programs are regularly updated with little-accessed ones being withdrawn



and between five and 10 new programs going up each week.

The average cost of downloading a program is a very reasonable \$2.50 although some of the more complex business utilities can cost about \$50.00.

You are probably wondering where all of the programs come from. Well, some are Australian and some come from overseas. Local software houses and Microtex 666 members supply quite a few, while overseas sources include what is believed to be the world's largest Commodore user base, Canada's Toronto Pet Users Group (TPUG).

Microtex 666 also publishes programs from Compunet in the UK and soon it will offer programs from the Uptime network in the US.

Amiga users

Unfortunately, complications with publishing rights mean Amiga users can't download Telesoftware programs. However, hopefully Amiga users will soon be able to join in the fun as Microtex 666 is talking with TPUG about the rights to Amiga software.

Microtex 666's 13 different Bulletin Boards are already well known so we won't go into lots of details about them all except to say that the most popular BB is Chat Line.

As the name suggests, Chat Line lets members chat to each other - something they obviously like doing as about 400,000 messages have been posted on Chat Line since January last year.

Basically, Chat Line lets members

put up three line messages which then gradually scroll up the screen as new messages are received.

Importantly, Chat Line operates on a "real time" basis so chatters can respond to each other promptly, a factor which has let Microtex 666ers make lots of new friends and even enjoy the occasional romance.

And, because the service is national, these relationships span state borders so members who move or holiday interstate have a host of friends to look up. Members often get together for parties too.

Question and Answer

On a more serious level, members have access to a Technical Question and Answer service if there's some aspect of their PC or software they need help with.

There's heaps more too but space limitations mean there's not enough room here to talk about all the fun and facilities Microtex 666 can bring to your PC screen.

But if you do want to know more, just contact Microtex 666. Bear in mind that because it's a PC-oriented service, Microtex 666 doesn't send out promotional brochures or literature. Instead you can telephone them on (03) 531 8411.

Or, if you're already on Viatel, you can contact Microtex on page *6661810# or send a mailbox message to Viatel number 353180330. You can also browse through Microtex 666's main index on *666# to see what's on offer.

Remember too that Microtex 666 is good value for money. A 12-month membership subscription is \$66.66 with annual renewals discounted by \$10 to \$56.66.

But if a six-month or three-month membership is more your thing, these are available too for \$39.50 and \$25.00 respectively.

So, if you want to add a new dimension to your life, who not take time out to investigate joining Microtex 666? ■

The Appointment Manager

by Adam Rigby

New staff writer and assistant editor, Adam Rigby, was having trouble keeping appointments. And so, a new program was born. Here he explains what it does, how it works, and how you can type it in.

SOME PEOPLE consider the Commodore 64 to be a computer that only really has one purpose, and that is playing games. Many a program has been written that shows this statement to be totally incorrect, however not much has been written for the 64 in the same style as that of the Amiga desktop utilities and definitely not in BASIC.

We decided to correct this problem by writing an *Appointment Manager* program that is easy to use and simulates a window style atmosphere. The *Manager* is capable of using different files so as to create individual records for different people or purposes.

Once the program is up and running the title page will appear - just press any key to continue. Thereafter you will be presented with a window with various options that you can select by moving the dark green bar over your selection and pressing return. Please note that options Search through to Calculator are only available on the full version which you can get from Prime Artifax on (02) 808 1860 for \$14.95. Of course, you can add your own, or run it without those options.

Files

Pressing return on this option brings up another window with two more options, Load File and Save File. Selecting Load file brings up a warning screen saying that all data will be overwritten continuing from this point will bring up the name prompt, typing in the name of your appointment file will load it into memory where it can be viewed or edited.

To save a file just highlight the save option and insert the appropriate disk that you want to save to and enter the name of the data file.

One of the main inhibitors of this our first version is that it is not possible to save over an already existing file, to do this it is fairly simple to modify the program, just add the following:

```
2795open15,8,15:print#15,"s:"na$:close15
```

However, this will not let you know if you have overwritten a file or not, it just erases the file if it is there, so accurate records of what is on the disk must be maintained.

Edit/View

Pressing return on this option brings up two new windows and a date prompt. At the prompt enter the month and year (you must enter the year without the two prefixing numbers

e.g. for May 1988 just enter 05-88) - this can be separated by a slash, comma, hyphen or nothing at all). After you have entered this a calender will pop-up with a highlighted bar over the 1st day of the month. You can move this bar around with all four of the cursor keys, hit return to select the day you wish to view or edit.

A large blue window is then opened with the date displayed at the top and various times listed down the side. A message is displayed saying that the program is locating your entries, after a brief pause another message is displayed.

At this point you can either press "e" to edit or "v" to view your appointments for this particular day. If you choose edit you can start typing in the day's memos or hit return to go to the next time slot. When you have finished just type the left pointing arrow, "<=", and a message will enquire whether all is correct.

If you select view at the edit/view prompt you can view the

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Programming

day's information and then edit it if you desire, as when the information is displayed a prompt will again ask if all is correct, if you enter "n" then you can proceed to edit the day just as in edit mode.

Search

Pressing return on this option brings up a Sydney telephone number and a message saying "Order now". This may well appear to be a very strange search routine and indeed it is. Search is not implemented on the demonstration version that you have typed in.

The full version

The demo version includes the main idea behind *The Appointment Manager* as the simple implementation of it. It is a practical tool in itself, yet not nearly as powerful as the full version, which has the following improvements and additions.

- Search Facility
- Printer dump of all appointments
- Notepad
- Calculator
- Report - sorts and prints out specific time spans.
- All compiled code to greatly increase

execution time.

As you can see this turns *Appointment Manager* into a very powerful and useful desktop tool.

The programming

All programs can be broken down into subroutines that do specific tasks, below is a list of what each part of *The Appointment Manager* is designed to perform.

Program Structure

- 20 - 200 Input routine
- 210 - 360 Initialise variables
- 370 - 720 Menu Control
- 730 - 950 Get and test Date
- 960 - 1020 Print Calender window
- 1030 - 1190 Print Calender
- 1200 - 1320 First Day Calculation
- 1330 - 1350 Save this program - for updating program
- 1400 - 1420 Disk Error check
- 1430 - 1640 Select day with cursor keys
- 1650 - 2270 Edit day
- 2280 - 2390 Locate matching data
- 2400 - 2690 Load data file
- 2700 - 2860 Save data file
- 2860 - 3090 Data statements
- 4000 - 4080 Print title page
- 5000 - 5090 Order now message!

The way it works

Appointment Manager stores your information in arrays. The message is stored sequentially in en\$(x) with the corresponding variable en(x) containing the location of that message. The numeric variable en(x) contains the year, month, day and time joined together to make one value that can be matched. For example to store the message "Have lunch with Andrew" to the 20th of April 1988, the computer stores the information as such:

en\$(x) = "Have lunch with Andrew"
en(x) = 8804209

The variable en(x) breaks down into - the year 88, the month 04, the day 20 and the time position 9. The time position is just the position starting from 9.00am, through to 5.00 with steps of 30 minutes. Therefore 1 is 9.00am and 17 is 5.00pm.

Storing these values is very simple because it just stores en\$(x) and en(x) until en(x) is equal to zero. So the sequential file consists of the number of records followed by the records themselves. ■

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Programming

Paper parking with Star NX-1000

by Eric Holroyd

REGULAR READERS of my jottings will know that I use both Star Gemini 10X and Star NX10. The 10X is now over three years old and has really worked hard for its keep in the office and has much useful life in it yet, being not at all worn in spite of all I've put it through. The NX-10 was Star's successor to the 10X and I'd reviewed it in this magazine back in April '87 most favourably. It too gets plenty of use in the office.

Star have now released the successor to both of these machines in the new NX-1000 series and I'm here to tell you that it's a beauty! It's faster, has more features than previous models and it's nice and easy to use too.

The NX-1000 series first of all gives you a choice of four built-in fonts which you select from the soft-touch front panel. Choose from: Courier, Sans Serif, Oracle and Normal. All can be printed in Italics and in the different type-sizes of Pica (10 CPI), Elite (12 CPI), Condensed Pica (17 CPI) & Condensed Elite (20 CPI) as well as a very nice Near Letter Quality print. In addition, you can also select proportional Pica or Elite from

the front panel where there are colored LEDs which light up to confirm your choice of print operation.

In normal draft mode the NX-1000

prints at a very respectable 144 characters per second and in NLQ mode at 36 c.p.s. This shows a marked increase in speed over the NX-10 which printed at 120 c.p.s. draft and 30 c.p.s. NLQ.

Paper parking

Standard equipment on the NX-1000 includes a single-sheet feed chute which works very well with a new feature called "paper parking". This lovely idea lets you feed a single sheet of paper into the printer without having to unload the tractor-feed paper. A touch of a couple of buttons on the front panel winds back the tractor to "park" the paper just at the entrance to the rollers and puts the tractor in neutral whilst you feed in the single sheet down the chute. Very, very

do something on coloured paper for example. I'm sure that feature will get lots of use and I think it's a beauty.

You'll understand from this description that the tractor is at the rear of the printer, in other words it's a "friction and push" tractor feed as opposed to a "pull" feed on the old 10X. This means that you can actually use the first sheet of paper instead of wasting it as you do normally with the pull type.

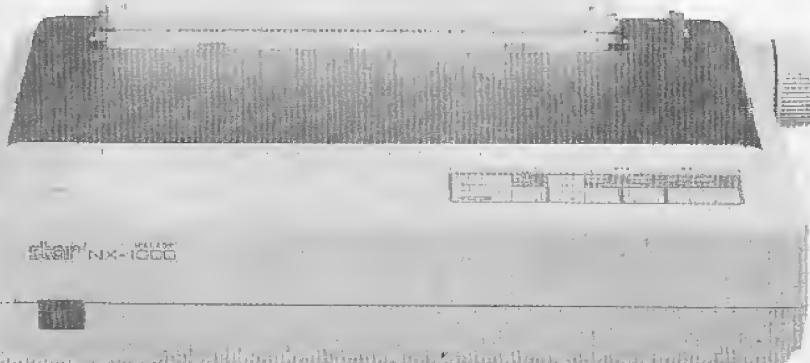
Another very useful idea is the inclusion of a 4K print buffer. This holds quite a lump of text and lets you quickly get on with your work on screen whilst the printer carries on with its work. I like that idea a lot as it means I can save the document on to the data disk whilst the printer's still printing it or even switch off the computer altogether if I need to. Once having got used to having a print buffer I'd hate to have to work without it!

Compatibility

A high degree of compatibility is built in to the NX-1000 parallel model. This is the one you can interface to your C-64 or C-128 with any of the Centronics interfaces available (although I wouldn't look any further than the XETEC Super Graphics Senior personally), or to your Amiga direct with a cable. It'll perform just as well with other systems too as it uses Epson-based control codes in the standard mode and IBM Pro-printer II codes in the IBM mode.

For an extra \$100 you can get a version of the NX-1000 which prints in

(Continued on page 24)



handy if you want to print a special letter on that precious embossed paper you've been saving up, or if you want to

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Incorporates Centronics printer software (user port) with CBM graphics capability (requires user port centronics cable). A RESET switch is fitted.

(We have found this to be "unstoppable", it even preserves the tape buffer). NO MEMORY IS USED by this cartridge, it is totally "transparent" and uses special switching techniques. "128" and 1570 compatible in '64 mode. PLUS MANY MORE USEFUL FEATURES TO MAKE YOUR 1541 FAR MORE FRIENDLY TO OPERATE.

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"EVESHAM 8 MINUTE NIBBLER" still very powerful and has been improved. Copies a few that the three minute version won't.

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four colours. I don't have too many details of this at the time of going to press, but I've seen text printouts which are nice and crisp and I'm told that graphics printouts from programs which support colour printers work fine. On the C-64 these would include programs like: *Geos*, *Doodle*, *Teddy Bear-rels of Fun*, *Create with Garfield* etc and on the Amiga I'd imagine (although I haven't checked them) that the painting and printing programs would support colour printers. Ask at your supplier for info on this aspect.

Double height and quadruple height printing is available on the NX-1000 series and is very useful for making eye-catching headings etc. It's possible to do simple advertising "flyers" right on your printer with these print sizes too.

Manual

I must make mention of the manual accompanying the NX-1000 series. It's really good and is a model of what I think a user guide should be. Straightforward language, easy to understand instructions, spiral bound (as all computer books should be) and it has a good appendix which sets out all the commands for doing all the functions possible on this fine printer so that anyone writing a printer program can look up the codes easily and quickly.

Also, for those programmers, there's a hexadecimal print/debug mode which does a nice job of printing out exactly which codes the printer is receiving and which would be a tremendous help in debugging a printer program.

There's much more in store for you when you enquire about the NX-1000

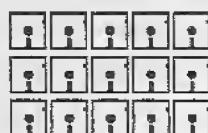
and I'm going to let you have the pleasure of finding out more for yourself. Seriously, whether you're looking to upgrade your present printer or if you're a first-time printer buyer, you should check out this range.

It's made even easier for owners of Commodore computers, as the NX-1000C is a Commodore-dedicated printer with all the features of the parallel version. It's designed to connect direct to Commodore computers without the need to buy a special interface.

R.R.P. \$599 for the NX-1000 & NX-1000-C, \$699 for the colour versions.

Star printers are distributed in Australia by Star Micronics (02) 736 1144 and Computermate Products (02) 457 8118.

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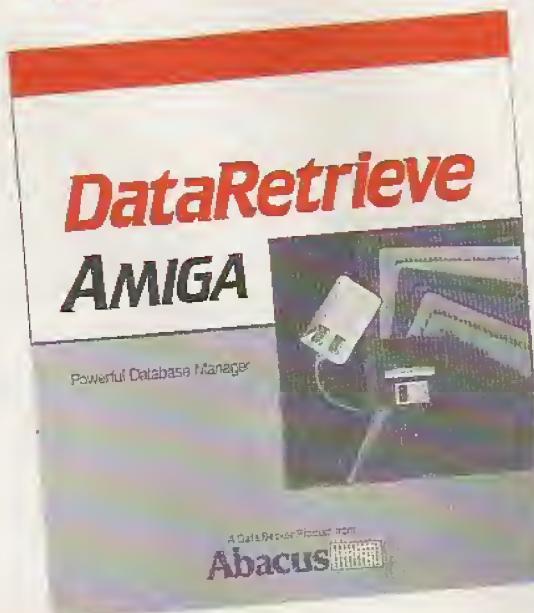
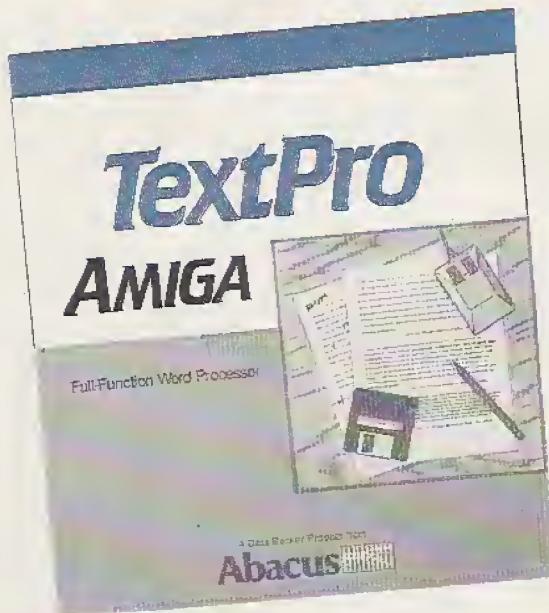
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Editorial

BIG NEWS this month is that *Professional Page* is now shipping. Now the Amiga 2000 can safely compete amongst the competitive field of contenders for page layout applications.

The initial release version only runs on a PostScript printer. Two updates are already planned. By April we should see support for dot-matrix printers, and come August the HP-Laserjet drivers will also be available. By registering with Commodore upon purchase of the product, updates will be available at no extra charge.

We are very excited about this product, as plans are already in the making to produce the *Australian Amiga Review* entirely on Amigas.

Already, all our front covers have been the product of Amiga's brilliant graphics capabilities.

Virus update

On another front, a new virus is out. This time it's not just a message on the screen. Now, the program really does some damage, scrambling disks and erasing data. We recommend you get hold of Vcheck 1.2 and 1.9. The later version will detect the latest strand of this disk-eating disease.

To quote one Commodore official, the warning is simple, "If you pirate software, you run a greater risk of catching the Virus ... it's a bit like AIDS." There you have it. Pirates are more at risk than the rest of us, so take care just what disks you're prepared to accept from friends.

Andrew Farrell

Australian Amiga Review
21 Darley Road,
Randwick, NSW 2031
(02) 398 5111

Published by:
Saturday Magazine Pty Ltd.
Editor: Andrew Farrell
Publisher: Gareth Powell
Advertising: Ken Longshaw
(02) 398 5111 or (02) 817 2509

Production: Brenda Powell
Layout: Amanda Selden
Subscriptions & Back Issues:
Tristan Mason (02) 398 5111
Distribution:
Selected dealers and as part of *Australian Commodore Review*
Printed By:
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2. Notepad - Small snippets of information for everyone.

3. New Products - What's new on the market or about to be released.

6. Sculpt 3D - An excellent easy to use, but very powerful 3D ray tracing program.

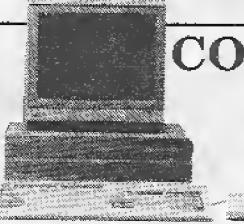
7. TV* Text - Make your own video titles.

12. Clicked on games - Geebee Air Rally and Space Ranger

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NotePad



If you've got something everyone should know about, send it to Amiga Review, 19A Frederick St., Putney 2112. Deadlines for copy are the 1st of the month prior to the cover date.

Hard drive happenings!

Although Kickstart 1.3 is expected to support hard drives, allowing the Amiga to boot directly from one, Comm-spec Communications is already one step ahead. They recently released the only hard drive available which supports booting of both Kickstart and Workbench. No Australian supplier has been announced as yet, but we'll keep you informed.

However, even more exciting is the announcement of a removable 20Megabyte hard drive system. Inner Connection produced the 5.25 inch drive with onboard SCSI controller aimed at the interactive video and graphics workstation market.

Each disk cartridge costs around \$99 (US) and will hold 20 megabytes of data. There is no data loss due to head crashes, and access time is a low 40ms average.

The idea seems brilliant for package systems, with software and data ready to go. Just insert the appropriate environment disk and you're away. Clip-art for desktop publishing, or frames from an animation sequence. Music lovers could record entire songs digitally at close to CD quality.

Once again, no Australian supplier as yet. However this development is so exciting we think you'll be ordering direct from Inner Connection Inc.

12310 Brandywine Rd., Brandywine, MD 20613. Telephone (301)372-8071, that's in the US of A of course. Drives are priced at \$1695 (US), which translates into big Oz-dollars. But, you can grab a few of those removable 20Meg disks, and you'll have one massive storage system, at a real top rate per megabyte.

Several formats are supported, including 100% Amiga-DOS or MS-DOS, 50/50, 25/75 or 75/25. We suggest you enquire as to what controller cards are supported, as new ones were being added at the time of writing. The Commodore Amiga 2000 will not work, as it does not support RLL code (1:8) density.

New Virus!

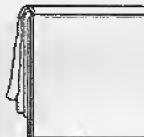
Word is about that a new strain of Virus is breeding. This one ain't quite so harmless as the earlier version. Talk exists that an even harder to crack version could be floating around, peeking at the Time/Date stamp, awaiting the right moment to simultaneously activate.

One of the capabilities of such a virus is to infect the sector read commands. When you check to see if the boot-block is "normal" the smart virus could just return a "normal" block.

Here's a way to decrease the chances of getting the Virus. Use only one boot disk, and keep a backup that is out of circulation.

When copying Public Domain software from a friend,

Notepad



Notepad

use the COPY command rather than DISKCOPY. You won't get any unwanted disk sectors. Be especially suspicious of BINARY-ONLY programs, which include (unfortunately) a whole lot of SHAREWARE/FREWARE programs. These can be found on BBSs, comp.binaries.amiga and the Fish and AMICUS disks.

A bad guy could very easily add the virus to the file. Use your OWN compiled version from comp.sources.amiga. Play it safe! Even Fred Fish compiles himself most of the sources he gets.

Another thing that has to be clarified is that viruses are no new thing and definitely not limited to the Amiga. In fact, over four years ago one existed that was much talked about. It simulated a UNIX login prompt, and would be left running on a shared terminal, for the casual user to log on and get his password.

Viruses for the IBM PC have usually consisted of modified shareware programs. The idea is not new. The problem pops up on ANY currently available micro/mini/mainframe.

If you just didn't know, IBM's VNET worldwide network was put to a halt for almost two

weeks due to a virus like program. The perpetrator was never found, and worse of all there seem to be no quick answer/change that will avoid this in the near future.

Here at *Amiga Review* we strongly suspect a few heavily pirated programs could be responsible for many of the Virus infections which have been showing up. One such program is *Emerald Mine*, better known as *Boulderdash*. Be warned!

Amiga at Expo '88

When you're visiting Expo '88 see if you can spot the Amigas. We have word that they're in there somewhere, although it's still to be confirmed. Any readers with further info?

AmigaDOS replacement project

In AmigaDOS, all the commands such as DIR, DISK-COPY and COPY are written in C. Charlie Heath, author of TxED, is heading a special project to revamp these commands. The process involves a total rewrite using 68000 assembly language.

At the end of it all, we will

end up with faster commands that take up less space. So far 15 commands have been replaced. These are available, complete with the necessary arp.library on Fish Disk 123.

Sales sky-rocketing overseas

Heading a new thrust of advertising, Max Toy, the newly appointed president and chief operating officer of Commodore International, is already reaping results.

Under the banner "Video Test Flight", expectant buyers can test fly an Amiga 500 and see for a fact that "It talks, it animates, it educates, it's a home office, it's a video studio, it's arcade games in stereo ... it's the new Commodore Amiga 500". No doubt many socks will be found strewn across the runway at touchdown.

The multi-million dollar campaign is also aimed at Commodore 64 user groups with members following a special upgrade path. Package deals, combining bundled software and the machine of your dreams, are attracting thousands of buyers. Commodore Australia have yet to move in the same direction,

with no official word on a similar scheme.

Down-under sales

Amiga software sales are on the up, and yes, the C64 is slowing down fast. It ain't dead yet, but 15,000 new A500 owners can't all be wrong. The total count for Australia is now pushing the 20,000 figure plus. They aren't all mad C programmers either. Almost 50% of Amiga users are first time computer owners.

A1000 still in production

Whilst supplies of the current Amiga 1000 have dwindled to the point of non-existence, we are promised it is still in production. As expected, a revamped circuit board, much like the A500, is now being used. The A1000's robust power supply remains, as does the casing. A cage to be released here soon will enable the 1000 to accept A2000 expansion boards. Companies who produced many of the gadgets peculiar to the needs of Amiga 1000 owners have found themselves sitting on thin air, with no machine to support.

Hot & Cool Jazz

Electronic Arts has released its second Music Creative Library Disk, titled *Hot & Cool Jazz*. The disk works with *Instant Music*, *Deluxe Video* and *Deluxe Music Construction Set*.

Over 40 different tunes are piped into your system, including Ragtime, Swing, Bebop, Latin and Fusion Jazz. Available from most computer retail-

ers, for around \$69.95. Distributed by ECP.

Artscape Artdisk II

Whether you're into publishing, or just enjoy the splendour of a good graphic, sail on down to your local dealer, and check out Artscape's new *Artdisk*. It's full of more goodies

New Products

to cut and paste into your own production, or admire on screen. We've even thought about putting a few through the Palette, and blowing them up into wall posters.

In the disk, or on the disk, depending how you prefer to think of things, you'll find paintings, cyclepics, icons

and drawing to colour in at your leisure. Well worth the \$49.00. For further information on this and other services offered by Graeme and Lai Whittle at Artscape Studios call (02) 977 1829.

Gee Bee Air Rally

Gone are the hair-pin turns and oil slicks of the racing games of yesteryear. Now you're flying the skies in a sin-

New Products (continued)

gle engine cliff hanging air-in-your-face plane. Beats the pants off most plane racing games, probably because it's the only one of its kind.

Great fun to play, and to watch people play, as they duck in a desperate bid to slip under a low flying competitor. Full review elsewhere in this issue. Available from most stores for \$69.95. Distributed by Imagineering.

Megadisc Five

Although we've taken careful note that the *Amiga Review* gets no mention on Megadisc, be it read that we mention them. Issue number five is out, packed with plenty of interesting reading, and a few useful utilities. However, our pick of the pack were the pictures in this month's art gallery. Good value, another well produced month, guys - keep it up. For enquiries, check out the advertisement in this issue.

Acquisition 1.3

Version 1.2 was met with less than enthusiastic response. It was awkward to use, and difficult for beginners to get into. Over 200 suggested improvements have been executed to arrive at the second release which should also include a written tutorial. However, to date Commodore are only offering a disk upgrade, as they have not yet received the tutorial manual. For information on the upgrade, contact Matthew on (02) 427 4888. A review on the upgrade, along with further information about the tutorial, is expected soon.

Aegis Video Titler

Desktop video fans, now you can go to town with this new package from the people who get it right the first time. Full review next month. Very reasonable price at \$79.95.

Distributed by Commodore Business Machines.

Pro-Video Plus

Demonstration versions of this program have just arrived in Australia. It's magic stuff! There's some 200 extra commands, and the ability to use IFF background pictures. At the moment, due to video memory limitations, only NTSC is supported. For us that means no full screen displays. Not really a problem in the world of video. Priced at \$295 (US), an Australian distributor should be announced soon.

Drum Studio

OziSoft are now distributing a package that promises to turn your Amiga into a powerful dedicated drum machine. With over 20 digitized drum samples, each with a 16 level volume and tone control, you have a selection of over 5000 different sounds.

This new techno-drum kit allows up to 100 patterns to be stored in memory. Each pattern can be up to eight measures long, with as many as 96 notes per measure. *Drum Studio* was produced by Digitek, Inc. For further information contact OziSoft on (02) 29-5088.

Accolade Graphics Studio

Also new.. and we only just managed to slip this one in, is Accolade's new *Graphics Studio*. First impressions were that it's not as powerful as *Deluxe Paint II*, but priced at \$99.95 it's certainly a lot cheaper.

Features include zoom, various fill patterns, a selection of demonstration pictures, scaling, a complete 4096 colours, dither and more. Sounds a bit like a combination between *Digiview* and *Deluxe Paint*. We'll have our experts onto it next month, so

watch for that. Distributed by Ozi Soft.

plenty of other improvements in store.

Fast File System

An alternate file system that can be mounted onto any hard drive you can attach to the Amiga will soon be available. The fast filing system will be released on its own with a new mount command that understands *FileSystem=1*: *newfs*.

It will support hard drives with greater than 55 Megabytes, and also DOS partitions. About time! And there are

New from Sub-Logic

Jet for the 68000-based computers includes all of the features earlier versions, plus additional scenery areas, a combined dogfight and target-strike combat scenario, multiple window displays, and additional external aircraft and missile's eye views. A special multi-player option allows you to fly together or engage in aerial combat with each other. No release date as yet. ■

Amiga Infomat

by Eric Holroyd

I SAW this neat idea in an advert in one of the English Commodore-related magazines and promptly sent off my money for it as it seemed to be just what I'd been looking for. I was right! It was!

Basically, it's a mouse mat made from quite thick laminated plastic and it measures 13" x 11" (or 330mm x 800mm if you prefer) and it has much of the info you need for general reference when working on your Amiga. The idea is simply brilliant as you don't need to keep getting out the reference books for syntax guidance and if you get one of the dreaded Guru messages the explanation is right there on the InfoMat of why it's crashed. Also the surface of the laminated plastic is ideal for smooth rolling around with the mouse.

The InfoMat costs 5.95 pounds sterling including postage. If you send a sterling cheque from your bank it should translate to about \$15.00 plus the bank's charges so it's not expensive. It's certainly a good idea and well worth getting. One side of the InfoMat has the AmigaDos commands listed and ex-

plained whilst the other side has the Guru Meditation errors listed along with the Subsystem ID codes, the General Error codes and the Specific Alert codes. It's all been put together by the well-known British writer/programmer, Tim Arnot, who's also written the *Commodore 128 Companion*.

This 340 page book tells all about Basic 7.0, has complete memory maps for C-128 & C-64 together with lots of detailed hardware descriptions. It reveals the Kernel, Editor and Basic jump tables so all you programmers would benefit greatly from it. It also lies flat on the desk when open, as should all computer-related books. Get it from the address below for 10.95 sterling (about \$27.50) including postage.

If you have friends with other computers for whom you want to buy a handy present, or if you're an Amiga owner using the IBM sidecar, the publishers have an MSDOS version of the InfoMat available and Atari ST owners are also catered for.

BitStream Publishing (Dept Y), 26-28 Osborne Road, Southsea, Hants, PO5 3LT, U.K. ■

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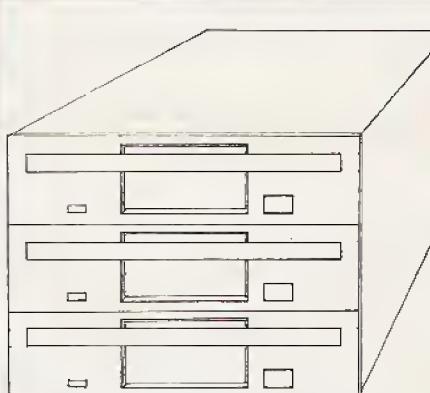
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Sculpt3D and raytracing

Review courtesy of a US BBS and Megadisc

I HAVE been happily playing with *Sculpt 3D* for the last two weeks. It is a wonderful program (already one of my favourites on the Amiga) and Eric Graham has done an excellent job of taking something inherently difficult (3D design on a 2D display) and made it easy to use, but powerful.

I recommend this program to anyone interested in 3D design and ray-tracing.

It is NOT an animation program, but is meant as a modeling and rendering package.

A companion animation package may be done "in a few months" (Byte-by-Byte rep at Siggraph). One of the nice things about *Sculpt 3D* is that it is easy to learn, and well-documented. The user interface is very well thought out: it seems to have a minimal number of tools (some important ones seem to be missing at first) but with use one finds that almost anything can be accomplished fairly easily. Colours and surface properties of faces are selectable. Colour is set with sliders (no fixed palette), among the surface properties are dull, shiny, mirror, transparent. Light sources can be coloured. Viewing is easily set up with a target and observer. "Lenses" are selected to alter viewing of the scene (normal, wide angle, telephoto and selectable).

Smoothing of planar facets is selectable on a face by face basis. The imaging modes include wireframe (no hidden line removal, good for fast scene setting), paint (flat shaded faces, much faster than ray-tracing), snapshot (ray-tracing without shadowing, HAM output) and photo (shadowing, HAM output).

Anti-aliasing is also selectable, as well as interlace and high-res (for non-HAM modes - HAM is 320 only, right?). There are also several image sizes for very fast ray-tracing just to get a feel

for whether lighting and camera position are correct. One nice thing is that rendering is a background process, you can continue to work on a model while it or another is being rendered.

A couple of

morerows. Oh well. The interference caused by screenblanker is very bizarre. In HAM mode large images take a LONG time (I have had them go overnight easily, especially with mirrors). At some point screenblanker kicks in, dimming the colours in the screen used for the ray-

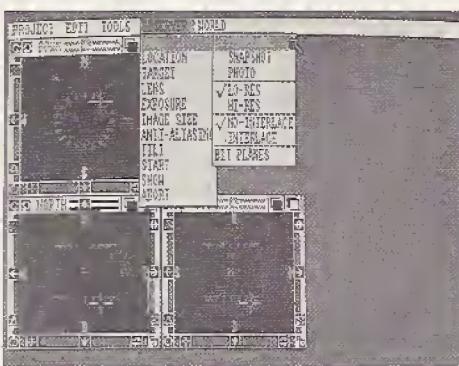
traced image. Apparently the HAM algorithm looks at the brightness of the preceding "real" pixel, decides how bright it wants this one and sets the colour accordingly. The result is that the HAM colours are fine with the screen dimmed, but when you move the mouse and the colours go back to full brightness, there are garish bright streaks across the image emanating from the left most "real" pixels. It's kind of neat to see the HAM interaction, if it didn't take ten hours to do it! So no more screenblanker either.

It is not copy protected. I hope this doesn't mean it will be heavily pirated, the guy did a hell of a job. One Meg or more is recommended for complex scenes. Overall it is a fantastic package and is thoroughly recommended.

By the way, many Amigans are taking the wrong tack in the "Mac multitasking" war. Everyone is pointing out that they can do ray-traces in the background while accomplishing real work (certainly true). But Mac people will not comprehend this. Ray traced images are just not very impressive on a tiny black-and-white display. Tell them they can have multiple copies of the talking moose arguing with each other. This they will appreciate. ■



Heaths FastFonts package). Morerows seems to confuse it as to the image size of the rendered image, to the point where if the image is saved and immediately re-loaded, it is shifted to the right and wraps around to the left, and a requester tells



you "Error loading image". It also does not load correctly into *DigiPaint* (a great companion, since it allows you to touch up and/or work with the results of the ray-tracing, since they are in HAM mode). This is solved by eliminating

TV*Text

by Robert Kelso

A very useful tool for the fields of Video and Presentation Graphics

TRULY breaking into the area of desktop video, Zuma have produced a piece of software that makes your Amiga capable of replacing a titler and effects machine. Now your Amiga can save hundreds of dollars in artwork and slide production - actually make money instead of costing you a bundle. Who



knows, you may start the next big media empire.

With *TV*Text* you can produce dozens of variations of Amiga's own system fonts, such as those supplied with the workbench disk, as well as being compatible with Zuma's own fonts.

Zuma have been very forward thinking in their thinking as far as setup is concerned to come up with such a compatible package.

Complete IFF compatibility allows you to display pictures created on any other graphics program on the Amiga and this availability to move pictures between software works both ways - so if you feel that you could get in and spice things up a little with *Dpaint II* then there will be absolutely no excuses.

One feature of this product is that all

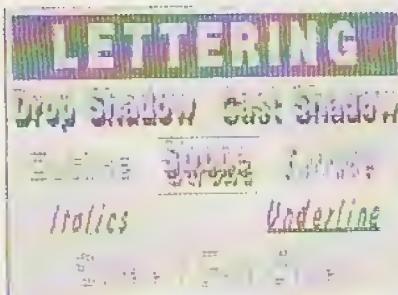
the Amiga screen resolutions have been supported including very high resolution

some of the options available to the user are: italics, bold, underline, outline, edge, extrude - for a three dimensional looking effect, cast shadows, drop shadows, strobes.

Simple manipulation of the background can give some striking results. One interesting feature is Wallpaper which fills the screen with a previously selected brush or pattern which acts as a background to your text.

Powerful text handling commands are available, including justification and positioning. This allows perfect positioning of your text and graphics so you can get exacting results.

It is highly advantageous to have a large font selection at hand, and Zuma has many to choose from.



Palette selectable from 4096 colours.
Adjustable light source and depth, Italic,
Bold and Underline.



Extruded (3D) with drop shadow.
Horizontal lines with outline and shadow.
Different font styles and sizes.



Their font collection, *Zuma Fonts*, has a huge range which can be easily used within this package. Such a purchase would prove very useful when using this package for serious applications.

As you can see this package allows some pretty neat little features for video production. You can probably save quite a bundle on video production costs or perhaps even start your own video titling business - who knows what amazing things can come from a simple purchase of Zuma software.

*TV*Text* is distributed by Imagineering and costs \$180.00 ■



Wallpaper background pattern.
Rendered ellipse with outline.
Stretched character spacing.

modes such as 702x592. This means that there are no borders as such, which is very important for those users who require production quality for professional results.

Fonts can be manipulated very easily,



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AD	Adventure	U	Utility
H	Home	A	Art & Graphics
BU	Business	M	Music
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- Clicked on Games

by Andrew Farrell

GeeBee Air Rally

STRAP ON A set of wings to your favourite Grand Prix game, and you've got the next generation in racing fun. Left, right, up and down.

Diving, swooping and only just clearing the field ahead as you race toward the finish line is captured in perfect perspective.

As the game loads, a black and white title screen is displayed, depicting the by-gone era of wind-in-the-face air racing. Take your time to watch as the display switches to colour, and turns into an animated fly-over. I love the music.

Now you're face to face with your high altitude persona who'll fly your plane to victory. Click on the throttle, and you're away.

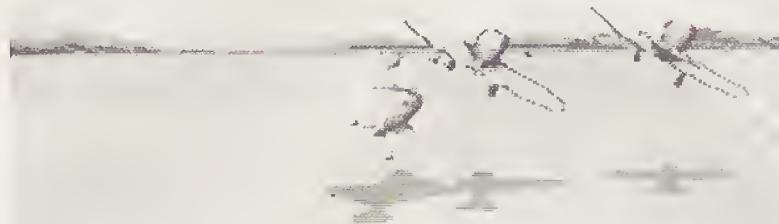
Looking down the track, which is marked by coloured towers, the opponents quickly race into view. Pull your nose up, and the plane gently climbs to peak altitude. Press forward, and you scream to maximum speed as the plane dives forward.

Bump other planes, or markers, enough times and you'll find yourself floating out of the sky on the end of a parachute - and there are some interesting landing sites.

In essence, your goal is to reach the finish line before your limited time allowance expires. Spare seconds at the end of

each race are divided by four and added to the time permitted for the next event.

to play, but not enough long term challenge. Recommended for parties, or just showing off your Amiga. Game by Activision, distributed by Imagineering. ■



GeeBee Air Rally

At first you're simply racing against the clock. Later on, the added worry of having to pop balloons as you fly comes into play. A few other variations later in the game help keep your attention.

Overall, I was impressed by the animation. The sensation of flying is very realistic, especially as the other planes buzz overhead. However, the game drags on, and quickly becomes boring.

A real first time thriller, a lot of fun



Space Ranger

Space Ranger

NOW HERE'S a change of pace. It's a cross between defender and the *Lone Ranger*. Rescue the critters, before they all get sucked away by this massive craft hovering overhead. Scenery scrolls from left to right. A radar screen shows where the enemy fly, and where the critters are currently bouncing around. By flying up and dropping a sort of capsule thing on them, that opens up

into a flying cage, they are zapped away to safety. You're armed and dangerous too. Any nasties that arrive can be quickly dealt with. They tend to be of the robotic form, with the later frames introducing a little of the weird and wacky.

The critters are classic comic-like characters. Rescuing them is a lot of fun, that involves especially good co-ordination. The space bar releases the capsule, whilst the joystick flies and shoots. A difficult game to master. A lot of fun to play. Very challenging.

Excellent graphics and fun music and sound FX. A good time waster for rainy days and lonely nights. Distributor to be announced. RRP \$69.95 ■

— Organize! —

by David Williams

OCASIONALLY simplicity is mistaken for lack of power. Make it easy enough for anyone to use and nobody will use it. On the Amiga, much good software has a strong hint of vanilla essence to its taste. But don't be fooled by first appearances.

From the makers of *Scribble!* comes *Organize!* From the mouth of Steven Pagliarulo, who is in himself Micro-Systems Software Inc., "Thank you for your support and concern of our software products."

Yes, we are concerned, Steven, that what we have here is a mere list manager, not a true database. A list manager is fine for filing lists, but not for managing a database. Lists of recipes, one you yourself suggest. Lists of names, and addresses. A replacement for the \$19.95 card box available from any good newsagent. I have yet to meet any good Amiga owner with a \$2500 investment busy filing recipes.

It could be that the vanilla taste is a trick and a conspiracy to make us poor Amiga magazine writers think we have less than what we really have got. Let's take a closer look.

Porting data

Scribble! users will feel totally at home. The icons, menu's and file options are similarly designed. Truly part of a suite of programs. Yes, you can port data between these two programs. You can also import *DBase III* files from other computers, or *DBMan*. You can't import the Index file, but *Organize!* will re-index for you.

The disk is unprotected. Start by making a backup. The manual is copyright. Please do not put Steven Pagliarulo out of work until he promises not to put his picture on the back of any more program manuals. Why is he smiling so

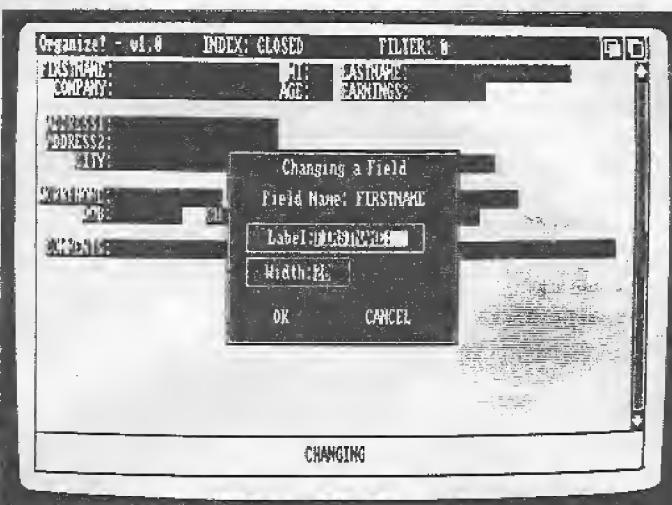
much? Maybe we should all just copy the manual.

Next step, design a database, or card definition as I prefer to call it. I tested *Organize!* by making a list of programs I'll never use. *Organize!* is a breeze. Fields may have meaningful names, and by either text, numeric, logical, or dates. Memo fields are not catered for as in *DBase*, however in all other respects the file structure is both similar and the same.

An example in the program manual provides inside information on the company structure of MSS. George Jones, a sales rep, makes a hearty \$54,000 (US) every year. Is this a form of self indulgence, or is the success of this company thrust upon us to instill confidence in their products?

I added a few records to my database. A little clumsy, but Amiga-S saves the current record, and the next appears for editing. It's possible to locate entries quickly using the search function, with four filters that may be defined to grab only those entries you want.

Once you're tired of the vertical arrangement of each record, or card entry, it's time for fun. Rearrange the fields using the mouse. Just click on the appropriate entry and reposition it anywhere on the screen. Simple, and effective. I



like this part very much.

It's artistic, and allows a personal touch to be added to every database. You can also change the field labels, and include headings. All these functions are explained well in the manual, and are even the sort of thing you don't need a manual or picture of smiling Steven for.

Forms may also include formulae, and special operations between fields. I couldn't find anything to indicate you could open more than one database, or link them in any way. A sad limitation. A list manager working at its best.

Report Generation

Reports can be generated which fit the criteria of a search function. Your report forms, filters, databases and database form may be saved as a project for later complete retrieval. It's quick and efficient.

Reports may be sorted, providing an index has been created. The manual tends to skim this whole function fairly quickly. One can only assume there is not too much to it.

A few CLI programs provide the import capabilities.

Conclusions

Fine for recipes, list of addresses and other nondescript type information. For home use, a real winner. It's sweet and easy. For serious use, there's better around. The same can be said for *Scribble!*, but then many people use it for that very reason.

And the price? A reasonable \$180.00. *Organize!* is distributed by Imagineering, and available from most good Amiga dealers. Little after sales support would be required. ■

The Amigados replacement project (ARP)

by Tim Strachan

THE ARP is one of the best things to have happened to the Amiga from its inception. Devised by Charlie Heath and Scott Ballantyne with help from some of the biggest names in Amiga programming, it sets out to improve AmigaOS substantially, and it succeeds. Essentially, what they have done is to replace most DOS commands (and eventually all) with alternative, compatible, more consistent commands written in machine code, with the result being smaller, faster commands and a more flexible, consistent and powerful user interface.

The original DOS commands had some inconsistency, some accepting multiple files, others accepting wildcards or pattern-matching, and some accepting both. ARP commands have incorporated all these capabilities in those commands which should have them. Hence special cases don't have to be remembered, and each command individually is more powerful, and the combination of all of them more powerful again. Furthermore, the on-line help facilities have been much improved - now, typing a command with a question mark will provide you with a template as before; however, you can then type another question mark and get a more detailed description of what that command does:

```
1> Type ?
FROMA,,,...,TOK,OPTK: ?
Type [upto 10 files] To outfile
OPT <H(ex) N(umbers)>
```

Similarly, when you make a mistake inputting a command, you'll receive more informative messages, for example, typing the following under Amigados:

```
1> Echo "Hello World!
Bad Args to Echo
```

You get a not too helpful message. The same action using the ARP echo would cause:

```
1> Echo "Hello World!
Bad Args: Unmatched quotes
```

This is rather more helpful.

Escape Codes

Another area of improvement is in Escape Codes, which allow you to send special information, such as colours, form feeds, carriage returns and so forth to other devices, such as the printer or screen. The new ARP escape codes contain the original DOS escape codes as a subset. Check the ARP documentation for details of these codes. As an example,

```
1> Filenote "Filename"
"X9B7mReverse Print
ComentX9B0m"
```

makes the Filenote to LIST in reverse print when displayed, making it stand out nicely.

Wildcards

(quoted from ARP Chapter 1)

ARP has an extensive set of wildcards, and most ARP programs allow them to be used. ARP supports ALL of the AmigaOS set of wildcards, as well as the more standard Unix* style of wildcards. ARP supports the following wildcard characters, note that these are valid inside or out of quotes:

(albc):	Will match one of a, b, or c. These can be patterns.
?	Matches any single character
f<pat>	Pattern repeated 0 or more times, in particular, f? matches anything.
[char]	A set of characters, for example, [abc] or [a..c] specify the same set.
[^char]	Match everything but this set of characters.
*	0 or more occurrences of any character.

These can be used in combination, of course, so that *.c:h) or *.[ch] will match any filenames ending in either .c or .h preceded by any number of characters, including no characters.

In addition, ARP allows wildcards to be used at multiple levels of a directory hierarchy. For example, if you want to type all the files in all the directories of

your INCLUDE directory, you could use

```
1> Type DFO:Include/*/*
```

Which will take care of things nicely. You can be more selective, for example only typing files that start with T in directories that start with E:

```
1> Type DFO:Include/E*/T*
```

Command enhancements

Here's a short description of the main enhancements contained in the ARP commands, apart from the general overall enhancements as listed above:

Assign - now capable of up to 10 assignments in a single command

ChangeTaskPri - checks the value of the current priority, and allows you to change the priority of the currently running task

Delete - now interactive, ie you can decide whether or not to delete those commands that you've selected by naming them or by using wildcards

Echo - no quotes are required, and the command provides a simple way of sending escape codes to, say, your printer

Info - now shows Formatted capacity of the disks, rather than full unformatted capacity, thus more useful

Prompt - recognises two new arguments, %N and %P, which allow you to incorporate both the task number and the full directory path as your prompt

Protect - Wildcards are now useable

Skip - using a question mark after Skip in a batch file allows the user to give a label to jump to

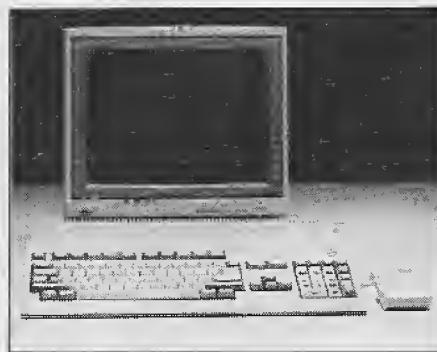
Sort - much more flexible

Type - allows multiple commands and wildcards, making it a much more powerful command (and eliminating the need for JOIN)

MakeDir - now capable of creating up to 10 directories

In short, ARP is a very worthwhile and useful addition to the great array of tools now available on the Amiga, and will provide a number of secondary benefits too - the commands will take up less space on your disks and run faster; there will be better software reliability as programmers begin to write their programs with ARP in mind (there is a full set of instructions for programmers' use); and your use of the Amiga will be that much more efficient and productive. Many thanks to the creators! ■

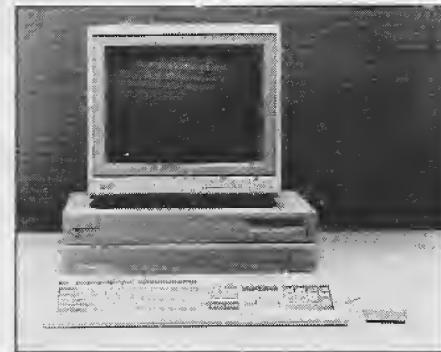
ANYONE WHO HAS JUST PURCHASED A CONVENTIONAL P.C. HAS MY SYMPATHY.



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Hints and tips from all over

by Tim Strachan

THESE hints and tips may give you a few ideas about using your Amiga. If you've got any such hints you'd like others to know about, write to me [Tim Strachan, PO Box 759, Crows Nest 2065] and they'll be published in a future issue.

Using logical device names instead of path names

If you ever have to copy something to, say, your C directory, or mention it in any way in a CLI command, rather than refer to it as d10:c or sys:c you can simply refer to it as c: because the C directory of your boot disk is a "logical device" recognised as such by AmigaDOS, just as your external disk drive is recognised as a "physical device", DF1: . The same comment goes for any of the other logical devices - DEVS:, LIBS:, etc.

To see what are the logical and physical devices recognised by the system, simply type > assign in the CLI. And of course you can ASSIGN whatever you like, so if you often refer to, say, the directory MYLETTERS:LOVELETTERS/ANNA, you could simply type this:

```
> assign A: myletters:loveletters/anna  
and in future just type a: when you would normally have typed the whole thing.
```

In fact, if you have a regular pattern in this way, you could set up an ASSIGNTABLE in your favourite text editor of all the ASSIGNs you want to make each session, and then insert in your startup-sequence the command EXECUTE ASSIGN TABLE

Make those games run in extended memory

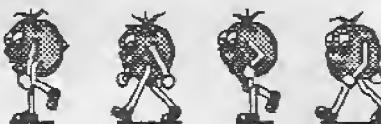
Some of the quirky games put out (and a variety of PD programs) don't handle expansion ram at all - get the program FIXHUNK2.1, which will normally be able to fix the problem. Find it on Amicus#17.

Penicillin Kickstart

This Kickstart replacement recently crossed my desk - some hackers group is responsible, and what it does is to give

you a warning if a disk you boot with has the dreaded virus. It also has a cute trick of saying "OH NO!" whenever the Guru visits! Only for the A1000 of course, being on disk - I've used it for some time with no problems, but it didn't behave itself on a friend's very customised system.

In fact there are a number of utilities around these days for "patching" Kickstart (only for A1000's), such as NOKLICKSTART, which supposedly stops your disk drives clicking. Another such patch allows you eight colours on your Workbench, so you can make very flash



icons from *Deluxe Paint*.

Joys of multi-tasking

If you're in the middle of a massive file copy and receive a system message saying "Disk Full", pull up another CLI, delete some unwanted files on your target disk, and then do a RETRY in the System Message. It will carry on quite happily. Try doing that on another machine.

Digipaint tip

Undocumented feature - only the first three letters of any word are required when typing into requestors. Saves a bit of time. Anyone interested can find a lot of *DigiPaint* tips in *Amazing Computing* Vol 2.11, and on Megadisk 4.

Huge source of images

Some people may not be aware that you can download graphics from a Macintosh bulletin board, run them through a program called *Macview* to convert them to Amiga IFF graphics and then import them into *Deluxe Paint* and colourise them, edit them, etc. After that you can import them into *DigiPaint* and go even further.

Soon to be available is a program for reading any Macintosh files from your normal disk drive, a very useful utility

which will allow you to convert text and image files to Amiga format.

Butcher 2.0 - image processing

This update to Butcher has many more features, and works a lot faster than the original. Anyone doing graphics should not be without this program which allows seemingly unlimited special effects with the click of a button. Works particularly well in conjunction with *DigiView/DigiPaint*. Some features: edge detection, resolution changes, pixel counting, half-toning, bit-plane slicing, and lots of palette effects.

The world of IBM on 3.5" disks

Anyone wanting to run the Transformer IBM emulation software on the Amiga but without the loot for a 5.25" drive could locate IBM software on the Toshiba 1100, which uses the 3.5" drives. On the other hand, you could look in the "OZ Products" article for information on getting a low-cost 5.25" drive. Note that you should have DOS3.2 or later to be able to recognise the disk as a 720K IBM disk.

Diskman 2.0

This is the latest in a long line of "Directory Utility" programs, which allow you to do practically everything possible from the CLI but without the typing - ie, a screen comes up where you can list directories on two separate windows and simply click on the mouse to copy, delete, rename, arc, show graphics, etc. Very highly recommended. The only trouble with this one is a tendency to crash when copying files of about 400K, which is infrequent.

This one was written by Greg Cunningham, and I've written for updates, so there may be the very latest soon available.

Proton Ram expansion board and X-1000 SCSI board

For those who have one of Proton Microelectronics Ram expansion units, and

who want to upgrade to a hard disk (as I do and did), the good news is that they work together. The Proton board sits on the side bus of the A1000 & passes thru to the X-1000 unit. The X1000 is an autoconfigure board, while the Proton is not - so in the startup-sequence you should simply put the ADDMEM command with the memory addresses (as in the manual). Forget about the MEMINSTALL command which appears only to call ADDMEM. The two live together happily and the hard disk hangs off the back - and I live with all three happily and hang off the front.

Using "join" and "run" together

Here is a tip for printing out multiple files in the background: Instead of using the silly print spooler found on AMICUS #8, use one of the built in AmigaDOS commands, 'join'. The join command is used to 'join' multiple files together into a single file. Well, how about 'joining' multiple files together into the printer file?

Thus to print out five files in a row to the printer, in the background, simply type: "run join file1 file2 file3 file4 file5 AS prt;" where file1 through file5 are the five file names to be printed. (This tip from the Amicus Disks).

Monitors for the Amiga

There is a Perth company which is about to produce an intelligent cable which will allow connection of the Commodore BM13 TTL monitor to the Amiga - this will have high resolution in monochrome (ie, it will do three grey scales), and will work with any similar long persistence monitor.

It should sell for about \$90, and sounds like just the thing for applications like CAD or Desktop Publishing. Available end of February.

Software Updates

● 1. TxED -

Version 1.31 is available now from MicroSmiths, Inc, PO Box 561, Cambridge, MA 02140 USA for \$39.95. Update for old owners for US\$7 with manual updated on disk (quote registration number). This is an excellent, small (22K) text editor with most capabilities, and it's robust and multi-tasks very well. I've had about 6 screens up at once, cutting and pasting between them, with no problem. Good for editing things quickly, knocking off a quick note, etc. [For another very good text editor, try AEDIT for US \$40, from: DRM Co., 1329 Arthur Ave, Las Vegas NV 89101 USA. You can even edit executable, binary files with this one! Generally extremely flexible.]

● 2. MIAMIGA FILE IIGS -

Quite a serious upgrade in many ways, the only remaining limit being a limit of 30 characters per field. Update cost is US\$40 with an updated manual, or \$10 without it. From SOFTWOOD.

● 3. Textcraft Plus

A big improvement over the original. Send the original disk and \$35 to: Commodore Promotion Textcraft Plus PO Box 695, Holmes, PA 19043 USA. ■

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April 1987: Revue of ABLE V3.2. Phone: 816 3700

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Amiga World, (US) Aug' 87
Reviewer: Ted Salamone

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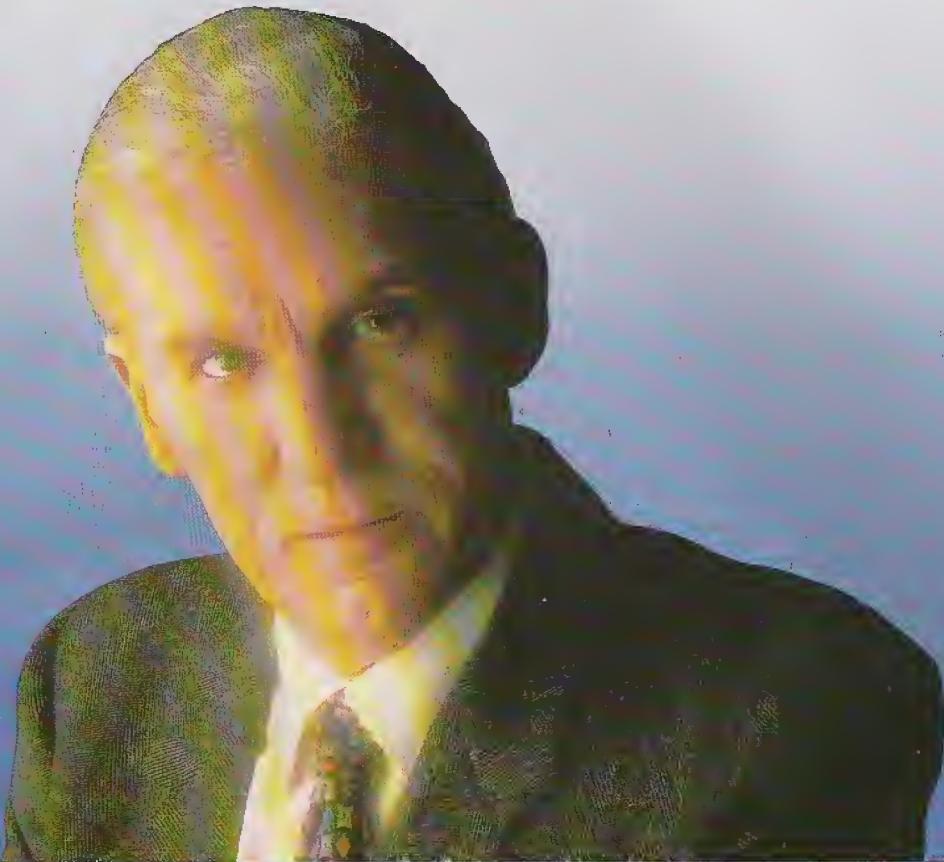
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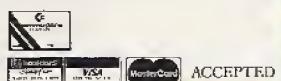
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PILE-UP!

by Justine Tiana

YOU ARE the pilot of the futuristic air propelling jet. Your mission is to successfully transport energy marbles to a transformer station, from which they can be delivered to earth.

Unfortunately no matter how easy this sounds you may be assured of the basic fact that controlling your ship, taking the appearance of a miniature yellow joystick, is far from a simple task.

After booting up this game the programmer's rather odd idea of music filters through your speakers, if you have some. It sounds a bit like unfinished experimental music.

It may well appeal to you, if you're into strange beeping and whirring noises that only run for about eight bars before repeating again, but I'm sure it will probably do a better job of annoying your mother.

The title page itself is nice enough to look at and serves its ultimate purpose, with *Pile-Up* written in a funny shaped blue box at the top of the screen containing two bouncing balls and a number of little flashing stars.

Situated below that are numerous amounts of strange but useful bits of paraphernalia that hang around whilst you are playing.

To begin with there is a rectangle in which your current level and appropriate aim is printed, eg: in level one

it reads "Do not leave any white marbles behind". Remaining are items that read out your present energy levels, power of thrust, xyz speed coordinates, your score or lack of, and a radar facility informing you when you are situated directly over a marble.

This particular feature is only really useful when you must collect energy balls which are not visible from a normal angle of vision.

As your task is to save the world from its advanced energy crisis, either caused by the union of intergalactic energy suppliers or demanded by someone in the name of progress, it is essential that matter for collection be retrieved quickly from this unusual plane disguising itself as a superdimensional chessboard, and delivered to a depot for immediate transportation to earth. Assuming, that is, that the universal couriers are not also demanding higher wages and better looking vehicles.

Sixteen by sixteen light and dark squares embody the board over which you hover. Above some white squares, not ALL as the instructions may mislead you, bobbing about ominously are marbles which originally appear black but change as the quadrilateral platforms beneath them rise. With these changes in both height and colour, the level of energy

in each ball either increases or decreases. The gain only occurs up to a certain altitude after which it starts to recess.

Controls

Definite skill is needed to obtain the balls as your controls are very sensitive. The fire button on the joystick operates the vertical thrust and it only takes a slight pressure to send your jet bouncing off the roof. This does not help at all as you will fly erratically around never being able to land on a marble-minding square, let alone managing to pick one up.

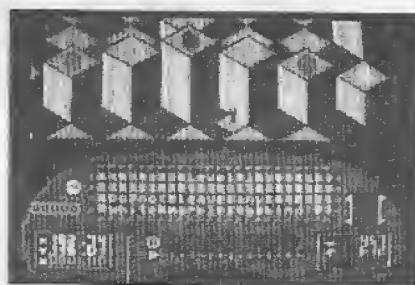
Your acceleration, the joystick itself, is also rather touchy. Precision steering together with an incredibly light touch on thrust is needed to accurately guide yourself to procure one of those elusive spherical objects.

Once you are sitting on a column you must slide over until you reach the marble there for compressing into your energy chamber, which takes on the same colour as that of the particular orb you picked up. Your aircraft is now twice as heavy as before, so more vertical thrust is needed to keep your ship above the evergrowing pylons.

During transportation the marbles must not be allowed to touch either the side walls of the columns or the ground. Even though supply has given you an extremely modern vehicle, which prevents explosive discharge of the balls, it costs you seven times more than the normal energy expended in a collision without cargo. If craft power becomes exhausted then your whole existence is terminated.

Re-charging

Up to a certain stage of the game you may re-charge at the service station, this



little extravagance however costs you some point score. How much I am not sure as my pilosity is so bad that only one marble ever made it in my few short attempts to master the art of jet flying and my lives were consequently too short to think about re-energising.

Unloading your weighty cargo is much simpler than its collection. Just fly right in toward the middle of the transformer station, a funny black board to the rear of the planet that you could not mistake for anything else, and the exchange will occur automatically.

It is important to be assured, howev-

er, that you are directly centred towards the middle of the equipment otherwise a nasty amount of power will be lost.

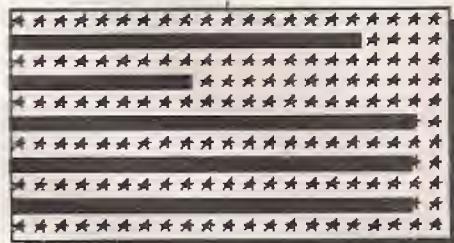
Next to the transformer station is an indicator which displays the number of energy units contained by your particular marble. This will be added to your total point score.

Pile-Up is an unusual idea for a game which catches your ini-

tial interest, this is unfortunately the only outstanding feature. It is cute and playable if one is either very skilled at jet flying or at being patient.

Pileup is distributed by Entertain-

Graphics
Music
Presentation
Documentation
Overall



Ten Great Games

Gremlin has released a games pack that is more than just an excuse to sell some more software. Adam Rigby examines this recent release.

HERE are bound to be countless new users of the Commodore 64 after the Christmas rush. Commodore themselves had a great deal of difficulty coping with the huge orders for the 64 over the silly season - so if you have just become a member of the Commodore family here is some information that could save you big bucks. Not to mention the many hours of entertainment that this package will generate with your newfound toy.

Most game packs are dodgy at best - say ten programs, nine of which are written in BASIC and reminiscent of public domain software in every way except the price that it cost you. It is not that I have anything against public domain programs, some of them are more useful than anything that you would ever buy commercially. It is just that they are not terribly high quality entertainment-style software due to the general lack of machine code programming.

Gremlin has made a name for itself in the home computer market with the re-

lease of many high quality pieces of software, so it was interesting to hear that they had released a game pack. I was certainly surprised at the number of popular games that were included. Names like *Trailblazer*, *Monty on the Run*, *Future Knight* and *Jack the Nipper* were big sellers only last year. This gives you a good idea of the quality of the overall product, which takes up four sides of a two disk pack.

The complete list of software included in the package is *Avenger*, *Future Knight*, *Krakout*, *Bounder*, *Footballer of the Year*, *Trailblazer*, *Highway Encounter*, *Monty on the Run*, *West Bank* and *Jack the Nipper*. As you can see you get a lot for your money, speaking of which the package costs \$39.95 for cassette pack or \$49.95 for disk.

Let's have a look at each item in the package individually.

Avenger

Another obscure plot that doesn't have much relevance to game play - you

look a little like a Ninja and have to rescue scrolls to avenge your father to appease the God Kwan. Apart from this rather different plot, the game has a look similar to *Druid* and *Guantlet*.

Your figure runs around a three-dimensional overview of forests and chambers collecting various items whilst

fighting off the many evil creatures that inhabit the arca.

The game revolves around collecting things from the general area, the trick is to do this in a specific order. This situation occurs mainly with the location and use of keys. Obviously keys open doors which lead to areas that contain items vital to the continuation of your quest. The best advice I can give in this game is to use your keys



wisely and explore all the areas as you can that do not need keys to enter.

A novel feature of this game is the way the status of your little Ninja fellow is displayed - you have two suns that act in a similar way to dials. When your energy gets drained by your adversaries, the dots around the dials disappear. When you look as though you're in danger of becoming the next closest thing to a Kentucky Fried Ninja you may call upon your friendly god, Kwan. This very generous and amiable god helps you three times, after that, his magnanimity turns to wrath and you turn into barbecued Ninja.

Avenger is quite a good game for those who like a bit of adventure thrown in with the typical shoot-to-kill game. It should keep you going long into the night with a massive 300 player screens to be covered.

Future Knight

You are Randolph. Your quest, to rescue your beloved maiden from the clutches of the evil Spegbott the Terrible - what an amazingly deep plot.



You receive an inter-dimensional distress call from the S.S. Rustbucket, the ship she was travelling in. The message reads:

"Crashed on the planet 2749 of the Zragg system. Require assistance. Princess Amelia captured. Teleport co-

ordinates 217/502. Please come quickly."

You pull on your all purpose attack suit (with laser-assisted plasma rifle) and rush to your local teleport station.

Three blips later (some foreign time span, typical of the complex and technical plots associated with modern day computer games!) you find yourself inside the S.S. Rustbucket. So begins your quest to find your beloved Amelia.

You progress through 20 gruelling levels, fighting your way through the wrecked space cruiser. Defending yourself against the Berzerka Security Droids, you finally reach the planet surface where you must do battle against mystical creatures to ultimately reach Spegbott's castle. In which you will find your beloved, guarded by the awesome Henchodroid.

Defeat him in mortal combat to ultimately release the beautiful Amelia.

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to draw curves of almost any shape you desire. DIGITAL ART is menu-driven, with 16 functions to choose from including TEXT, EDIT, MOVE, COPY, ZOOM, UNDO, PRINT, SAVE and LOAD (pictures.)

Sixteen colours and eighteen fill patterns are available, and lines as well as curves can be drawn and zapped in seconds.

DIGITAL ART can be used for school work, (Science and Geometry illustrations come to mind,) or just for fun: design a picture and see it printed on paper. Using the software is simplicity in itself, and a fully indexed instruction booklet is provided.

The most unusual feature of this package is the price. We have not priced it at \$79.99, or even \$49.99. The price of the package is **\$16.95**, including sales tax, postage & handling.

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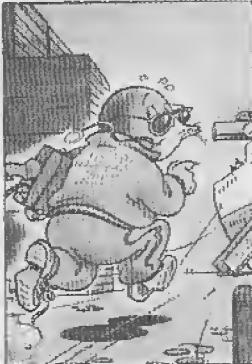
KINGSTON ACT 2604

objective, your darling princess of course. Some of these objects include, Exit passes, Securo key, Confusers and Platform keys - these all have different purposes that become clear as the game proceeds towards the final conclusion.

The game has fast action and contains difficulties that will entertain you for some time. The sound and animation are of high standard, comparable to some of the better games on the C64.

Monty on the Run

Super fit and desperate for freedom, Monty makes his daring escape from Scudmore prison. Hounded by the bastions of law and order, our frightened hero finds refuge with the criminal underworld who offer him the chance to breathe fresh air and bask in the sunlight once again.



Moving from safe-house to hideout to underground lair, Monty must select the correct five elements of his freedom kit from many he is offered. Monty must also collect the hidden

gold coins that will make him a mole of leisure.

To complete this game you will need a huge amount of dexterity indeed - it represents a great challenge and an all round fun game. In fact it has one of the best soundtracks of any C64 game that I have heard, even up until this date. It is worth just sitting in the first frame and waiting to hear the electric guitar solo that bursts out of the humble 1702's speaker.

This software displays the high standard of programming available on the C64, the graphics and animation are good and the music unbelievable. *Monty on the Run* will entertain the household though many joystick replacements.

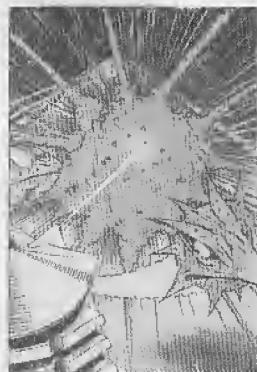
Highway Encounter

The aliens have invaded Earth. There is only one road left to travel before they reach their final goal - total world domination. Your mission, to halt their advance and ultimately destroy their alien stronghold - "Zone zero".

Under your control are five Vortans and the "lasertron", the world's most advanced weapon system. This must be taken to zone zero to complete your mission and destroy the Aliens.

The game is displayed as a three-dimensional road proceeding from the bottom left-hand of the screen up to the top right-hand. The Vortan is controlled from this viewpoint with standard left, right and forward commands that are issued by moving the joystick in the corresponding position. This makes play rather difficult because your eyes do not co-ordinate with your hand movements.

If you fail this momentous task you will face the deadly consequences of alien rule. The future of the earth rests in your hands, so you must prepare for battle and meet the challenge in this novel game from Vortex software.



Krakout

As of late there has been a vast quantity of breakout style games released on the home market, especially on the Amiga. *Krakout* represents one of the best breakouts I have seen on the C64. Great graphics, brilliant sound and many options to make game play have a more lasting appeal make this game from Gremlin close to the quality you would expect from one of the Amiga versions.



At the commencement of the game you are presented with some impressive music that could almost be the lead synthesizer for a new Bronski Beat album.

The game itself requires not much concentration and has an extremely low stress factor, probably an ideal game for the business executive or magazine editor. On a purely thrill and excitement level it does not have much to offer, however, it is very well put together and is quite good to play, with some pretty amazing animated sprites floating around the screen while you do just that.

Some of the options included in the game are:

- You may play on either the left or right hand side of the screen.
- Sound effects on/off.
- Music on/off.
- Scrolling - none/following/random.
- Ball speed (1-6).
- Modes
 - 0 - normal
 - 1 - 4 different alien and bat colours.
 - 5 - load new data from disk.
 - 6 - load new data from tape.
 - 7 - 9 ???? some super surprises.
- Bat type can be of either inertial or dual speed.

These various options make the game a little more interesting as the effects change the game slightly. This game is entertaining enough to keep you from the midday movie.

Bounder

Well, here is a different approach, you are a tennis ball. The idea is to control your new found identity around the screen, bouncing on the gray slabs only. If you miss, you fall to your death, and how many friend tennis balls do you know that would go to your funeral - pretty lonely existence bouncing around the screen with no other tennis ball friends to call your own.

Any collision and you lose a life. As a rule of thumb: if it isn't grey they avoid it! A variety of aliens are out to destroy, all of which would be at home in a Star Wars movie if by name alone. Binoculoids, stickits, moscita birds, chomper domes, pterries and exocets make up the cast of characters that try to end your days as a tennis ball.

Slabs with arrows give you just over twice the time in the air. This allows you to make longer jumps, and if you feel inclined, a few fancy aerobatics. Slabs with question marks give you a mystery bonus, some good, some fair but most of them are not so good - the world is tough for a tennis ball.

Bounder is a new and interesting concept compared with the average alien shoot-out. It will prove entertaining.

Footballer of the Year

You start your career at the tender age of 17, with \$5000.00 in cash, 10 goal cards and the footballing world at your feet. The aim is to develop your career and be nominated as footballer of the year.

The game is played using a control menu that allows the player to do various things that will affect his progression up the football ladder.



State of Affairs: This section shows your teams league position, the morale of the team, goals scored in cup matches and league matches.

Player Status Details: Your rating as a footballer is displayed as bar graphs depicting status points, your current league and your weekly earnings.

Transfer Cards: These can be purchased at varying prices depending on which division you are in. Upon buying a card you have the chance of being spot-

ted by a 'scout'. If the 'scout' finds that you are a suitable player, then you will be transferred to another club either in the same division, or a higher division. If you are successfully transferred you will receive players fee plus the chance of a higher salary.

Incident Cards: An incident card can be purchased for \$200. This section is a bit of a gamble but can prove very lucrative. However, on the other hand you risk losing money.

Play Matches: When this option is selected, you are given the chance to purchase goal cards. Goal cards can then be used in any of the matches which you play. The value of a goal card will be between one and three, it is up to you to use your skill and judgement as to when the cards are used. For example if the

value of a goal card is two, then you have the chance to scoring two goals in that game.

This is where your skill as a player will be needed when you enter the arcade sequence and attempt to beat the defenders and score a goal or take a penalty.

Results for the matches will then be printed on the screen and from these you will be able to deduce if your goal cards have been played wisely. This will enable you to alter your strategy for future games if necessary.

Trailblazer

A simple concept, brilliantly carried out - you are represented by a rolling ball. Thundering along at a breakneck speed, you must avoid the various gaps in your path. Also various coloured squares have different effects on your movement.

Blue - Bounces your ball into the air.

Purple - Throws you

backwards.

Cyan - Reverses the control, left is right and right is left. Green - Speeds you up.

Red - Slows you down.

White - Warps you along the trail at an unbelievable speed.

The aim of the game is to complete each of the 21 tracks as quickly as possible, each course has its own time limit. There are two and one player availability.

This is one of my personal two player favourites. Watch out for the review of *Trailblazer II - Cosmic Causeway* in next month's ACR.

West Bank

Soft City smells of gunpowder

Born with the gold rush that swept the West, it has among its famous establishments the West Bank, an institution which leads to the most desperate shoot out south of Dakota.

Everyone longs for the riches hidden behind the bank walls. Your self-control is the only charm that can prevent it.

The Characters:

Green Jordan - the farmer, the untiring worker who goes to the bank to put in his savings. You should not shoot him.

Jack Viscious - the sponging swindler of the West. Don't hesitate - shoot whenever you see his face.

Daisy - the beautiful daughter of the City jeweller, always loaded with money - never hurt her.



Alfred Dalton - a read baddie. Shoot as soon as he takes out his gun!

Bowie - the dwarf. He is a constant practical joker. Make holes in his hats but take care that the bottom hat doesn't conceal a bomb or you will lose a life.

Joe Dalton - Alfred Dalton's brother, it runs in the family, shoot as soon as he takes out his gun.

Mackeyham - the bloodthirsty villain. Everyone trembles when they come up against him. Don't hesitate or it might be too late, shoot as quickly as you can.

Julius - the dandy. He is a box of surprises, he may give you a bag of gold or he might shoot you. Take things very carefully with this one.

? There is a ninth mystery character. Wait and see what he does, then eliminate him as soon as you can!

The Game Plan:

The offices of WEST BANK have 12 doors. Your job is to obtain money deposits from each of them. The days of which there are two to each game, are divided into nine stages: the last two are at night and are extremely dangerous! You will lose lives each time you are shot or shoot at an innocent person and you only have three, so be careful.

When deposits have been received from the first three doors, move left or right to the next set of doors. This can

only be done when all doors are closed.

The Duel

Between each stage there is a duel to be fought with three paid assassins. Watch the countdown meter at the top and open fire against them as they draw their guns. Be sure to be quicker or you will lose lives.

The End

Defence of West Bank is a venture for strong people. They will all try to withstand continuous shooting for two whole days. What is the mystery behind the second day? The answer is floating in the air. The secrets of the treasures were invented only for winners with the will and determination to succeed.

Jack the Nipper

Jack was tired of all the wimps in his town, their boring games and goody goody ways sent him to sleep. So Jack, being of a rather naughty disposition, set about livening things up a bit, he picked up his trusty pea-shooter and scarpered off to cause some trouble.

This is where you come in to take on the role of Jack and use your imagination to be as naughty as possible doing the things you always wanted to do but dare not (YOU WIMP!). Jump on things,

pick them up and drop them, use your pea-shooter to create smashing effects and toot your horn at the cat.

Use the items you pick up wisely then you must work out where you have to drop them to cause ultimate havoc. For instance what would you do with a tube of glue?

The idea is to score well on the Naughtyometer, and generally make trouble - this one is a good game for those who manage to cause havoc already as



they tend to know what they are doing. However if you feel that you would like a turn at being a chaos-head, to perhaps sharpen your ability at making trouble then this game is definitely for you.

I would like to dedicate this particular game to someone who manages to break the unbreakable - Stu Pecker.

Ten Great Games contains some very good tiles indeed, and at \$49.95 for the pack on disk and \$39.95 on tape you are definitely getting your money's worth. Distributor is OziSoft. ■

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Commodore owners getting into PCs!

by Andrew Farrell

NOT MANY people know that Commodore have a range of IBM PC, XT and AT compatible machines. In fact, we use them to produce the *Australian Commodore Review*. A lot of our in-house wordprocessing is carried out using a Commodore PC-20. Just what do these machines have to offer the casual user of home computers?

Many Commodore 64 and Amiga owners have expressed interest in the MSDOS/IBM clone world. You may use one at work, or perhaps, if you're an Amiga owner, are actually using MSDOS on your equipment. In coming months, we plan to keep you up-to-date with what Commodore offers, along with PC news in general.

Lou Sander, a computer writer for *Commodore Magazine US* had some interesting words to say about PCs in a recent issue.

"... the PC is much less fun, Commodore-land (*Ed - C64s and Amigas*) has lots more interesting programs and lots more interesting programmers."

He was speaking about his own AT clone, the fastest of the big-blue world of desktop computers that's currently readily available. Yes, new models have arrived, but we'll leave them out for the moment.

Lou continues, "... the hard drive makes loading and saving instantaneous. Other than price, that's the biggest tangible difference in the systems. Another big difference is the file names. MS-DOS is limited to eight very specific characters, while we (*Ed - C64 users only!*) get to work

with sixteen characters."

We all know Amiga users enjoy as many characters as they want, well, almost.

Lou didn't like the new keyboard at first. However we think it's great. Bigger, more spacious, a large return key, numeric keypad, separate cursor keys, etc.

There's more memory too. Most machines have at least 256K RAM, with as much as 640K appearing on expanded versions. But, strangely enough, the software that runs on a 256K computer is not four times better than C64 owners enjoy in the 64K of their RAM.

Software is generally more expensive. However, there is a good supply of public domain programs, and many hundreds of amazing utilities. Just check out the Downloads area for PCs on any BBS!

Terminology is different. There are additional cards and ports. Things like EGA and CGA and monochrome start

popping up. All these just refer to the PCs colour and graphics ability. That's something us C64 users are used to having plenty of. Not with a PC! You don't always get it all standard.

The video display is 80 columns, although you can select 40. You'll need a monitor, and a hard disk is recommended. Music capabilities are almost nonexistent, and programming the thing in BASIC can be tricky at first, but there are some very powerful commands.

Why are people buying PCs?

So, they are not as good as your old trusty. Well, at least not at first glance. But now, you can really use the office wordprocessor at home. Or even work from home altogether! Imagine that.

However the biggest difference that's attracting buyers to PCs in 1988 is the price. You can now purchase a system with an amber or monochrome monitor, hard disk and bundled software for under \$2500.

For the home business person, professional writer, programmer, or serious school student, that represents good value. The games are not too crash hot, in fact many border on being a poor excuse for a graphics card. But PCs work, and work reliably, quickly and quietly.

What does Commodore offer?

Let's get one thing straight. There are many different brands to choose from when it comes to PCs. As a rule, programs written to work under MS or PC



DOS work on just about all models. So, we can't really be too objective when it comes to recommending models in a Commodore magazine. However, they do have a few units worth checking over. All the PCs run at 4.77 Mhz, which translates to a 1:1 ratio with IBM speed wise.

At the bottom of the heap is the Commodore PC-5, priced at \$1395. It arrives complete with monitor and *Able-1*, a multi-purpose Unix originating package for wordprocessing, communications and file management. It works well, is easy to use, yet reasonably powerful. *Able* handles pie, bar and line graphs, and also has a simple spreadsheet type program.

Sidekick, a pop up utility package with Notepad, Dialler, Calculator and Calendar - a must for serious users - is also included. The graphics card is only mono-text, and 512K RAM is included.

To make the PC-5 useful, you'll need

to add a hard drive, or additional floppy. It's cheaper to do that yourself, than buy the next model up, the PC10 at \$1999. Arriving in a variety of versions, it basically a dual drive PC-5, with 640K RAM and AGA card.

Next up is the PC-20. It has a 20 megabyte hard drive, 640K RAM, and for another \$299 on top of the base price of \$2999, you get a green screen monitor. Prices on all three PCs vary greatly, depending on your dealer, and his proximity to other competitors. Larger cities normally offer the best buys - the PC market is highly competitive.

For speed freaks, and memory maniacs, buy a PC-40. It has a 20 megabyte hard drive and is Commodore's answer to the IBM AT. That spells fast, and it also means glitches according to some owners who have experienced many problems with these machines. An AT is not the sort of machine home buyers would rush out to buy, but a medium sized business

would find the extra power very useful. Recommended retail \$5995.

Alternatives

There are other means of running MS-DOS. You could buy an Amiga, track down a copy of the *Transformer*, and it will also provide MS-DOS compatibility. A hardware solution is Sidecar, now in short supply, but still around the bigger dealers such as Micro Computer Spot, Sydney. Retail price \$800. Sidecar plugs into your A1000 expansion port and provides two expansion slots, 512K RAM and works with 99% of MS-DOS software.

A2000 owners might opt for the Bridgeboard. It suffers from heat exhaustion, so we suggest you ensure that a couple of heatsinks are strapped to the bigger chips. Once it works, the bridgeboard runs well. With A1090 drive controller, you can share your PC hard drive with Amiga DOS, and MS-DOS. ■

Money Manager Plus

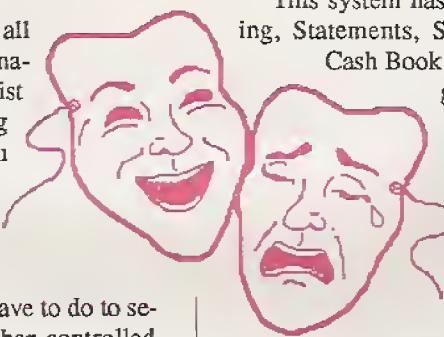
PACTRONICS HAVE just released a new and quite different accounting package for PCs, *Money Manager Plus*. It combines some of the features of a database, spreadsheet and graphics package in one neat and simple to understand format.

Money Manager basically keeps records of all your transactions for the year and allow you to analyse your performance for that period. You may list your transactions in a number of ways, specifying which accounts and classes may be included. You can produce a wide variety of tables and graphs which then enable you to analyse your financial position thoroughly. Any of these reports can be printed on a suitable printer.

The software is quite easy to operate, all you have to do is select an option and highlight it with a moveable bar controlled through the cursor keys. All other prompts have a default value so that you can safely hit return until your fingers can take no more.

The detailed statements would make financial housekeeping a breeze, just take them along to your accountant and let him do the rest of the work.

For further information contact Pactronics on (02) 407 0261. Recommended retail price is \$99. ■



Everyman accounts

ALSO FROM Pactronics, is a simple invoicing, sales, purchases and nominal package aimed at the small business or self employed.

This system has the following modules: Invoicing, Statements, Sales Ledger, Purchase Ledger, Cash Book, Creditors Ledger, Debtors Ledger, Nominal Ledger.

This is quite a handy piece of software for those who do not want to get too caught up in trying to learn complicated software and yet at the same time need a program that is useful.

Some of the features that this package has to offer make life quick and easy. If you have to print out invoices, it has the ability to print them in various groups such as monthly or all outstanding.

Everyman is definitely designed for the laymen with very simple, easy to understand commands. Recommended retail price is \$149. ■

Superbase 64/128

Database design

by Peter Gallen

Visual database design

So far we have explored the need to plan our database fields to be able to manipulate data in as many ways as we need. The next step is to visually present the input screens in both logical and visually appealing ways.

It doesn't matter if your database will only be used by yourself at home or several people at work, the important point is clarity of presentation. If your field names are too cryptic they may appear smart now, but their meanings will quickly fade when other users can't figure out what data to put where. Worse still, if you can't remember in six months time what the field names refer to!

When setting up data files in format mode, give due consideration to clarity of both meaning and presentation. It is a good idea to break up similar data fields and separate them with lines.

Titles

Use meaningful titles for each screen without being verbose. The 40 column limitation of the C64 tends to make you abbreviate excessively, while the 80 columns of the C128 tends towards verbosity! Remember that you have about 1000 characters of descriptive text per database. If you are using two or three files in an application, you can have all three file definitions in memory at once only if you restrict the amount of descriptive text used for each. The trade-off is between speed in changing between files and "bells and whistles" in each screen design. An example of verbosity would be to call a file 'CLIENT ADDRESSES FILE'. Here the word file is already implied. If you do use more than one screen for input it is important to indicate this to the user, eg at the top right hand side

```

10 rem add client program
12 database "hotline",9,0
15 file "venues"
20 clear:select c
30 ask &1"[a]dd,[q]uit to menu";op$
40 e=0
50 m$="aq"
60 for i=1 to len (m$)
70 if mid$(m$, (i-1)*1+1, 1)=op$ then p=i:e=1
80 next i
90 if e=0 then 30
100 on pgoto 170, 405
170 select a:goto 400
400 screen n:select c:goto 20
405 database "drive8",8,0
410 load "client.list"

```

Figure 1 - Dual Disk Drives

write "Screen 1 of 3" and in the bottom right hand corner add something like "... + + +" or "... Screen 2" to indicate that there are more screens.

Field grouping

This simply means put similar data fields together or in the order of planned input, eg name, address, phone; amount owing, amount paid; updating and status fields; comments. Don't be afraid to use more than one screen. With simple programming you can even control which screens are presented to the user. Remember - with *Superbase* you have control.

Highlights

The use of lines to separate data fields mentioned earlier is easy to do using the combination of the Commodore key and lowercase 't' or the standard hyphen key, and is very effective. Different screen/text colour combinations are

worth considering for each file, but make sure the colours selected do not make the screen illegible or difficult on the eyes over a period of time. Don't overdo effects - good visual design is to aid the user.

Consider highlighting a line of descriptive text at the top or bottom of the screen. This is done by positioning the cursor at the beginning of the line chosen and pressing F1, then 'I' for 'inverse'. Try it and see the results.

Multiple disk drives

The use of multiple drives is poorly documented in both the Superbase manual and Dr. Hunt's book. Two drives are necessary for any really serious work - or even cataloguing a large collection of "things" at home, especially if you are using a 1541 drive with a capacity of about 160K per disk. One disk should contain all your programs, leaving the other dedicated to data. Two drives also

Programming

greatly reduces the tedium of disk swapping with the risk of malfunction or insertion of the wrong disk at a critical stage.

The references simply state that "database "SALES",8,0" will log into a database called "sales" on a disk in drive 0 of unit 8. This convention is a hangover from the old PET/8050 days of dual disk drives. As no dual drive is readily available for C64/C128 users, this convention is frustrating and cumbersome. But stick with it or funny things may happen. What the references omit is that each time you want to

```
10 rem start program
100 brkon:gosub 400:rem allow break key and set system parameters
110 display @12,3"-----"
120 display @12,4"1"@+"DATABASE ""1"
130 display @12,5"-----"
140 display @1,13"-----"
150 display @1,16"           Written by Peter Gallen
160 display @0:rem reset display count
170 database "database":file "filename":rem insert your own here
200 load"mainmenu"
210 end
400 rem *** set system parameters ***
410 lmarg 1:rmarg 80:rem margins
420 plen 66:tlen 60:rem page & text length
430 pdev 4:pdef 0:rem printer device 4 cbm code
440 lfeed 0:cont 1:rem no line feeds, continuous print
450 space 0:across
455 date "oljan88":rem set date format
460 screen 0
470 return:rem the first screen
```

Figure 2 - Initial or Introductory Screen

But what database is on drive 8, you ask? Here, you need to trick *Superbase* by setting up a dummy

database containing no files or data. Simply type in : daT" database8",8,0. When *Superbase* replies that it doesn't exist, answer yes to "Create a new database?" and an empty database will be created. This database only exists so that you can access drive 8 again. This may appear difficult and clumsy at first but, after some experimentation, it works

quite well and you'll see the LEDs flash-

A short tip some of you will be aware of, and I find a great timesaver, is the use of abbreviations for commands. I know that commands can be abbreviated to three letter tokens but I never bothered to learn them. I have found, though, that two are very useful in *Superbase*: the first is the use of "daT" for database entry and the other is "diR" to access the directory instantly from either main menus or even within a program. This eliminates the awkward use of addressing the second menu, accessing the Maintain section through the F6 key, then F5 to call up the directory.

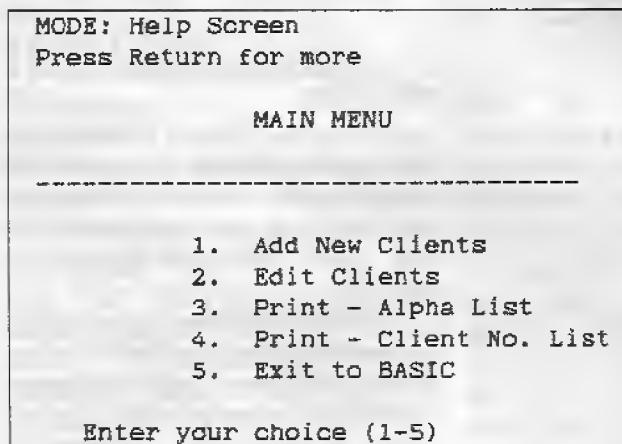


Figure 3[a]

change disk drives you also have to change databases, ie "database 8" on drive 8 and "database 9" on drive 9. The following short program illustrates this point. (Refer to Figure 1)

The clue here is in lines 12 and 405. Line 12 opens a database on drive 9 (data disk); all subsequent actions are carried out and, when completed, line 405 transfers back to the program disk in drive 8, ready for the next program to be loaded in line 410.

```
10 rem main menu
20 for i=1to4:read prg$(i):next
30 help "mainmenu"
40 display @0@29,20@+" ";
50 wait op:if(op<1)or(op>5)then 50
60 if op=5then quit
70 load prg$(op)
80 dataclient.add, client.edit,client.srch1,client.srch2
90 end
```

Figure 3[b] - Main Menu

Programming

The ability to program *Superbase* can be both exciting and intimidating. I can still remember the thrill I got just using the command line to enter simple one line programs. It was so different from the constraints of non-programmable databases.

The language used by *Superbase* is similar to Commodore BASIC and some knowledge is needed. I will not attempt to teach BASIC programming - there are many good texts on this. Don't be daunt-

programs with a minimum of change and use them to generate your own suite of control programs. Once you are familiar with their workings you can add your own ideas - and then share them with all of us.

```

10 rem add client program
15 file "filename"
20 clear:select c
30 ask &1 "[a]dd, [q]uit to menu";op$
40 e=0
50 m$="aq"
60 for i=1 to len(m$)
70 if mid$(m$, (i-1)*1+1, 1)=op$ then p=i:e=1
80 next i
90 if e=0 then 30
100 on pgoto 170,410
170 select a:goto 400
400 screen n:select c:goto 20
410 load "mainmenu"

```

Figure 4 - Menu accessed, add a client name

```

10 rem edit client program
15 file "filename"
20 clear:select c
30 ask &1 "[e]dit,[q]uit to menu";op$
40 e=0
50 m$="eq"
60 for i=1 to len(m$)
70 if mid$(m$, (i-1)*1+1, 1)=op$ then p=i:e=1
80 next i
90 if e=0 then 30
100 on pgoto 170,410
170 ask &1 "k/f/n/p/l";op$
180 e=0:m$="kfnpl"
190 for i=1 to len(m$)
200 if mid$(m$, (i-1)*1+1, 1)=op$ then p=i:e=1
210 next i
220 if e=0 then 110
230 on pgoto 250,252,255,257,259
250 select k:select r:goto 20
252 select f:select r:goto 20
255 select n:select r:goto 20
257 select p:select r:goto 20
259 select l:select r:goto 20
410 load "mainmenu"

```

Figure 5 - Menu accessed, EDIT a client name

ed if your skills are elementary, working through other people's programs gives you ideas. Remember that it's the end result that matters and elegance of style may or may not come to you. The programs that follow are not sophisticated, but are presented to be easily followed and adapted.

We will now create a menu driven set of programs to handle data, input, editing, sorting and printing. You should be able to adapt these simple

Let's start with an initial screen and main menu. I'm assuming that you're using a C64/1541 setup. The first program will be a modification of the supplied "start.p" program on your *Superbase* disk. (Refer to Figure 2)

To customise *Superbase*, enter your database name in line 120, being sure to adjust the borders in lines 110 and 130 if necessary. Line 200 loads your first program and presents the Menu

screen - a list of the functions necessary to control your database. This screen is actually a 'HELP' screen, composed by entering 'MEMO' mode and calling your screen 'HMAINMENU' (or 'H8MAINMENU' for C128 users in 80 column mode).

Your screen should look something like this: (Refer to Figure 3[a]) and the program should be like this : (Refer to Figure 3[b])

The exact positioning of the cursor in line 40 will depend on trial and error, but it should be positioned a little to the right of the 5 in (1-5). Line 80 will send control to several small, independent programs which execute the requests (1-5). Being small programs they load and execute quickly and do not use much memory. The first program allows you to either enter data or return to the Main Menu: (Refer to Figure 4)

Don't panic if this looks complicated at first. You can either use these programs "as is", merely substituting your

```

10 rem print - client alpha list/client.srch1
11 file "filename"
12 display @1,2" PRINT ALPHA LIST"
15 display @0@5,10"sorting records...please wait."
20 sort all on [client] to "calpha.list"
30 ask &1"output to screen or printer";op$
40 if op$="s" then 100
50 if op$ ="p" then lmarg 5:print:goto 100
60 if op$<>"s" or op$<>"p" then 30
100 output from "calpha.list"&[client][ref][contact][title]
110 eol display @15"End of List":wait:lmarg:load"mainmenu"

```

Figure 6 - Menu access, client alphabetical sort and output

program names where appropriate, or follow through the logic of each, so that you can increase your programming skills and be able to customise. Quickly, what happens is that your file is selected and an empty screen is presented with the options to add data or return to the Main Menu. The difference between this and the next program is that to add new data you use "select a" while to edit data you use "select r".

The next program - selection 2. from Main Menu - is more difficult, as it allows you virtually the same control as you would get from selecting F2 from the first menu screen. Note that you are not given certain options such as delete. You don't want to be able to accidentally delete data! (Refer Figure 5)

Programs 3 and 4 are very similar and illustrating sorting techniques. Program 3 sorts on (surname), ie alphabetically,

```
10 rem print - client number list/client.srch2
11 file "filename"
12 display @1,2"      PRINT - CLIENT No. LIST"
15 display @0@5,10"sorting records...please wait."
20 sort all on [ref] to "cref.list"
30 ask &1"output to screen or printer";op$
40 if op$="s"then 100
50 if op$="p" then lmargin 5:print:goto 100
60 if op$<>"s"or op$<>"p"then 30
100 output from "cref.list"[ref][client][contact][title]
110 end display @15"End of List":wait:lmargin:load"mainmenu"
```

Figure 7 - Menu accessed, Numerical sort and output

while Program 4 sorts numerically or (ref) for key field, or client number. A choice is given as to whether the output goes to the screen or printer. (Refer to Figures 6 and 7)

This suite of seven short programs form the basis for most database applications and illustrate many features of both *Superbase* and BASIC. They deserve close study and experimentation to

achieve a personalised menu driven system that suits you.

If you have any suggestions for topics or application problems, please share them. We'll be happy to discuss them in this series of articles. Write care of *Australian Commodore and Amiga Review* or direct to me at P.O. Box 115, Rozelle NSW 2039. ■

NICE-1650 - modifications

THE NICE MODEM is a relatively inexpensive modem for 300,450 and 1200/75 BPS operation, and connects directly to the 64 or 128. But it does have some limitations.

The first of these is that, as supplied, it will not autodial.

This is readily overcome though. If you open the connector for the user port, you will see a blue wire, which connects onto the same pin as a thick piece of braid. If this blue wire is moved to the pin labeled "J" then the modem can be autodialled by the appropriate software. It's recommended that you instal a switch to go between this setup and the original, though, as not all software will operate the Nice modem correctly. This relates to the Nice's second problem.

The second problem is that the DTR line, which is used to autodial the modem, is the opposite polarity of the 1650 modem, which is the de facto standard for the 64/128. This can also be overcome,

if you are handy with a soldering iron, and can find your way around in a circuit. All that is required is a 4069 I.C. and a little nous. One point to note here is that the composition of the circuit board in the Nice is delicate, and if care is not taken, circuit tracings will lift from the board readily.

Open up the Nice, and carefully remove the circuit board from the casing. With the circuit component side up, and with the switches facing you, find the 3-legged IC in the upper right corner. This is the 5 volt regulator, and with a voltmeter, find the +5 volt output, and earth (the centre pin). Connect, via a length of wire, the 5v from the regulator to pin 14 on the 4069 IC, and the earth to pin 7.

Find the DTR line from the user port, which was modified for autodial, and cut it. Connect the end going to the user port to pin 1 of the IC. Connect the end going to the circuit board to pin

2. That's it.

The mounting of the IC is up to you, in fact it's possible to mount it in the User port connector, using the +5 v and ground connections found there, but in either case, connect a switch to restore the modification to normal when needed.

Both mods are relatively simple, the first requiring only a short length of wire and a SPST switch. The second only requires some more wire and a 4069 HEX inverter switch, all of which can be found at Dick Smith, or similar. All up cost for both mods is less than \$5.

A word of warning though: If you haven't much experience with electronics, don't do it yourself, undoing botched work can be quite expensive. Also some people will find that when autodialling in 1200/75 mode, the CD line will react to the engaged tone. This is, unfortunately normal, but some term programs require carrier to be present for a second or so, and such programs will not react to the engaged tone. ■

Sempreviva

Everlasting IRQs

by Paul Cascun

The Sempreviva - a European flower that is everlasting. Never dies even after being picked.

NOW WOULDN'T it be nice to have an IRQ that would do the same? The usual problem is that you have one IRQ in memory, say your favourite screen colours in memory and a sprite handler on disk. You load in the sprite handler and the next time you press Run-Stop/Restore, there go your screen colours, or vice-versa.

What you need is an IRQ that will -

- a} Survive a Run-Stop/Restore and not affect the computer.
- b} Peacefully co-exist with any previous IRQs.
- c} Will capacitate any new IRQs that place themselves in memory.
- d} Should be fairly easy to relocate.

● a} Now the first one seems fairly simple, just change the NMIVEC (Non Maskable Interrupt VECtor) so that it points to your Interrupt. But then pressing Run-Stop/Restore has no effect except to re-enable your routine another time - and therefore disables the usual Warm Reset routine.

So to keep the Warm Reset routine we leave the NMIVEC alone and use the WARMVEC at \$0A00/\$0A01. Now after you have caused a Non Maskable Interrupt the computer JMP's off to the screen clear routines and other Warm Reset routines of that sort, then it looks at address \$0A00 and \$0A01 for the address of the re-enable Basic routine. Now usually at this time our routines have been disabled by CLR.IRQ routine. Now if we set up a routine that puts its starting address in the WARMVEC and sets up the IRQVEC again to our IRQ's starting address and which at the end JMP's to the normal enable Basic routine. This would still allow the normal NMI sequence to

occur and would still allow our IRQ to exist.

● b} Now this is a little harder. Before we put our IRQ's address into the IRQVEC we have to save the old address in two memory bytes (we will call these the NEW IRQJMP). Then we put our IRQ's address into the IRQVEC. At the end of our IRQ we have an indirect JMP to the special address where we stored the old IRQ's address. This also saves us the hassle of assuming that the IRQJMP address is \$FA65. In that way any old IRQ's are still JMPed to and if there weren't any then the normal IRQ JMP address is saved and JMPed to.

● c} Now this is the most important bit, constant protection. It's no good fixing it once and then leaving it. It's most likely that you will load in another routine after you have enabled your first, so the best bet is to constantly check to see any changes in the IRQVEC. To do this the easiest way is to have a double byte compare stuck on to the beginning of our IRQ. It should check the IRQ-VEC to see if any changes have been made by comparing it with the LSB and MSB of the IRQ's address. If any changes have been made we BNE to a subroutine called FIXIT.

At FIXIT we read the changes and put them in a two byte address we will later have an indirect JMP to (this should be the same address we put the original IRQ address in back in step (b) the NEW IRQJMP). Then we get our IRQ's address and put it into the IRQ-VEC. Then we JMP to the last line in our IRQ that should be an indirect JMP to the NEW IRQJMP.

In this way we have let our own routine be the first in line, then it JMP (NEW IRQJMP) to the new offending

routine, so doing that ensures that it continues to run.

● d} Now even if these techniques work they may still succumb to the old fight for the same memory, so it is also handy to make the IRQ fairly transportable. Because of the nature of the setting up of the indirect JMPs it can only be done using an assembler (if you only have the built in assembler you can still use it by changing the labels into addresses.) I have used the LADS assembler but it can easily be transferred to other assembler formats.

To change the address just change the value after the asterix.

The example program provided is just a simple IRQ that sets the screen to my favourite screen colour. A program layout is below.

```

100 - 180 Setting label values
210 - 250 Saving old IRQ address in
IRQJMP
270 - 310 Set IRQVEC to address of
new IRQ
320 - 360 Save old WARM in
WARMJMP
370 - 410 Set WARMVEC to address of
new WARM
450 - Warm Routine -
470 - 510 Set IRQVEC to new IRQ ad-
dress
540 Indirect JMP to the value at/in
WARMJMP
580 - The IRQ -
600 - 660 If $314&315 not the same
then go to FIXIT
670 - 720 Set screen colours
730 Indirect JMP to value at/in
IRQJMP
760 - FIXIT -
770 - 850 Save and set IRQVEC
860 Indirect JMP to value at/in
IRQJMP ■

```

Programming

```

10 *= $1300
20 .S
30 .O
40 ; SEMPREVIVA
50 ;
60 ; THIS IS AN EXAMPLE OF AN -
70 ; EVERLASTING .IRQ
80 ;
90 ; NOTE - FULLY RELOCATABLE.
100 ;
110 IRQVEC = $0314
120 WARMVEC = $0000
130 SCREEN = $D021
140 BORDER = $D020
150 CHR = $F1
160 BRCL = $00
170 SRCL = $0F
180 CRCL = $06
190 ; INITIALISATION
200 ;
210 INIT SEI
220 LDA IRQVEC ; SAVE OLD IRQVEC
230 STA IRQJMP ; IN 'IRQJMP'
240 LDA IRQVEC+1
250 STA IRQJMP+1
260 NOP
270 LDA #<IRQ ; SET IRQVEC TO
280 STA IRQVEC ; NEW 'IRQ'
290 LDA #>IRQ
300 STA IRQVEC+1
310 NOP
320 LDA WARMVEC ; SAVE WARM VEC IN
330 STA WRMJMP ; WRMJMP
340 LDA WARMVEC+1
350 STA WRMJMP+1
360 NOP
370 LDA #<WARM ; SET WARMVEC TO
380 STA WARMVEC ; NEW 'WARM'
390 LDA #>WARM
400 STA WARMVEC+1
410 NOP
420 CLI
430 RTS ; RETURN TO BASIC
440 ;
450 ;WARM START ROUTINE
460 ;
470 WARM SEI

```

```

480 LDA #<IRQ ; SET IRQVEC TO
490 STA IRQVEC ; NEW 'IRQ'
500 LDA #>IRQ
510 STA IRQVEC+1
520 NOP
530 CLI
540 JMP (WRMJMP)
550 NOP
560 WRMJMP ,BYTE 0 0
570 ;
580 ;* * * * THE .IRQ * * *
590 ;
600 LDA IRQVEC
610 CMP #<IRQ ; IF IRQVEC NOT THE
620 BNE FIXIT ; SAME GOTO FIXIT
630 LDA IRQVEC+1
640 CMP #>IRQ
650 BNE FIXIT
660 NOP
670 LDA #BRCL ; SET SCREEN COLOURS
680 STA BORDER
690 LDA #SRCL
700 STA SCREEN
710 LDA #CRCL
720 STA CHR
730 JMP (IRQJMP)
740 NOP
750 IRQJMP ,BYTE 0 0
760 FIXIT SEI
770 LDA IRQVEC
780 STA IRQJMP
790 LDA IRQVEC+1
800 STA IRQJMP+1
810 LDA #<IRQ
820 STA IRQVEC
830 LDA #>IRQ
840 STA IRQVEC+1
850 CLI
860 JMP (IRQJMP)
870 NOP
880 NOP
890 ;*****END*****
900 ;*****
910 ;***** END *****
920 ;*****
930 ;*****

```



Hints and tips

by Shadow of Ratt

Default device = 8

Type in the Basic loader and type run. If you have entered it without any errors, it will save two programs to disk. The first is the loader and the second is a M/C version. Next time you wish to use the program you can just load the M/C version and type SYS32768.

Please note that hitting run/stop and restore will have no effect on this program.

To load from tape you will have to type ',1' after the filename.

The program loads with a secondary address of '0', so if you want to load a m/c file (eg. DEV 08-32768) then you must type ',8,1' after the filename.

Pressing shift - run/stop will boot the first program on the disk, '*'.

To turn off the M/C loader you have to turn the computer off (or reset) or if you really want to you can restore the Basic warm start vector located at 770 & 771 (Dec) or \$0302 and \$0303 (Hex). This is done by typing in the following pokes in direct mode. Note the pokes must be on the same line, separated by a colon ':'.

Type POKE770,131:POKE771,164'

Well, that's about it. When loading from the drive you needn't worry about closing the inverted comma e.g. Load"Dev 08-BAS*" will be sufficient. Have a nice day!

I have included an assembly listing. This routine works just as well for a save. Remember not to use wild cards during a save operation!

```
(C) 1987 **** SHADOW OF RATT ****
5 REM **** SHADOW OF RATT ****
10 FORA=32768T032863
20 READB:C=C+B
30 POKEA,B
40 NEXT
50 IFCC>9518THENPRINT"ERROR IN DATA":STOP
60 PRINT"(DOWN)DATA TRANSFER COMPLETED...SAVING PROGRAM"
70 PRINT"BASIC LOADER..... DEV 08-BAS"
80 SAVE"DEV 08-BAS",8
90 PRINT"(DOWN)M/C CODE..... DEV 08-32768"
100 POKE43,000:POKE44,128
110 POKE53,000:POKE54,128
120 POKE45,093:POKE46,128
130 POKE55,093:POKE56,128
140 SAVE"DEV 08-32768",8,1
150 PRINT"(DOWN)RESETING MACHINE....TYPE 'SYS32768'"
160 SYS64738
200 DATA120,162,075,160,128,142,002,003
210 DATA140,003,003,088,162,032,160,128
220 DATA142,048,003,140,049,003,140,051
230 DATA003,160,067,140,050,003,096,000
240 DATA162,008,134,186,032,088,128,165
260 DATA183,201,000,240,003,076,081,128
270 DATA230,183,169,042,141,052,003,162
280 DATA052,160,003,134,187,132,188,076
290 DATA081,128,000,169,008,133,186,076
300 DATA237,245,000,032,012,128,076,131
310 DATA164,169,000,133,185,076,165,244
320 DATA169,000,133,010,096,000,000,000
```

Assembly language listing

,, 8000 78 SEI	,, 8032 A9 2A LDA #\$2A
,, 8001 A2 4B LDX #\$4B	,, 8034 8D 34 03 STA \$0334
,, 8003 A0 80 LDY #\$80	,, 8037 A2 34 LDX #\$34
,, 8005 8E 02 03 STX \$0302	,, 8039 A0 03 LDY #\$03
,, 8008 8C 03 03 STY \$0303	,, 803B 86 BB STX \$BB
,, 800B 58 CLI	,, 803D 84 BC STY \$BC
,, 800C A2 20 LDX #\$20	,, 803F 4C 51 80 JMP \$8051
,, 800E A0 80 LDY #\$80	,, 8042 00 BRK
,, 8010 8E 30 03 STX \$0330	,, 8043 A9 08 LDA #\$08
,, 8013 8C 31 03 STY \$0331	,, 8045 85 BA STA \$BA
,, 8016 8C 33 03 STY \$0333	,, 8047 4C ED F5 JMP \$F5ED
,, 8019 A0 43 LDY #\$43	,, 804A 00 BRK
,, 801B 8C 32 03 STY \$0332	,, 804B 20 0C 90 JSR \$800C
,, 801E 60 RTS	,, 804E 4C B3 A4 JMP \$A4B3
,, 801F 00 BRK	,, 8051 A9 00 LDA #\$00
,, 8020 A2 08 LDX #\$08	,, 8053 85 B9 STA \$B9
,, 8022 86 BA STX \$BA	,, 8055 4C A5 F4 JMP \$F4A5
,, 8024 20 58 80 JSR \$8058	,, 8058 A9 00 LDA #\$00
,, 8027 A5 B7 LDA #B7	
,, 8029 C9 00 CMP #\$00	,, 805A 85 0A STA \$0A
,, 802B F0 03 BEQ \$8030	,, 805C 60 RTS
,, 802D 4C 51 80 JMP \$8051	,, 805D 00 BRK
,, 8030 E6 B7 INC #B7	,, 805E 00 BRK

climbing. Eventually I hit Mach III, and kept going. By now the ground was closing fast. I pulled up, and the G counter raced up past 10. The screen blacked out, just as a message that I'd ripped the wings off appeared.

After a few moments of darkness, the screen reappeared. I was spinning helplessly. Another minute or two at fumbling with the controls, and the SR-71 was smattered into insignificant pieces. Chuck Yeager's face appeared, politely informing me that he didn't even know me, which didn't change things much.

Operation

Electronic Arts' menu system was a little difficult to come to terms with at first. Mainly because the documentation is a bit vague, and the Commodore 64 version seems to be one big errata sheet - with constant mention of changes and alterations. All very irritating if you didn't know what the original controls and keys were anyhow.

Apparently the program was developed on an IBM PC, then ported across to the C64 and improved upon - thank goodness - now where's the Amiga version?

After about half an hour of toying around, I still had hassles working out which keys did what when. It was mid morning too!

Flying the planes is tricky at first. Once you get the hang of the screen cursors, which which way your controls are headed, precision manoeuvres become far easier.

Throttle control is handled using the number keys. Your rudder may also be adjusted in special circumstances, but for the most part, you don't have to worry about it. Both brakes and flaps can be toggled up or down along with the land-

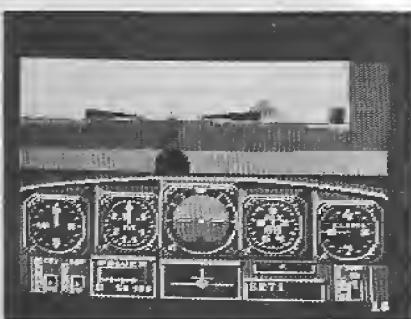
ing gear.

Action may be viewed from a satellite position, left, right, up, down, from the tower, from a chase plane, backwards and from the cockpit. The display can be paused, and sound toggled off or on. A simple zoom function, from a factor of zero to nine is available, and the forward view is also available with the cockpit removed.

Features

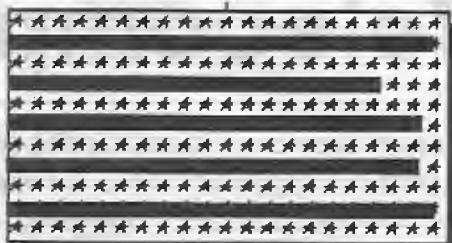
You thought I had mentioned them all, but here are many more. I suggest you buy the program. This one is on the short list.

Flights may be recorded, providing you don't crash before the end. There's a



flight instruction mode that hand-holds you through simple to complex manoeuvres as well as acrobatic stunts. You can take over the stick at any time,

Graphics
Music
Presentation
Documentation
Overall



just press ... Ah, if I told you that, you might not need the instructions.

In the airplane racing mode, the difficulty automatically increases, with a new opponent provided to match your skill as you progress. This was my favourite part of AFT, and probably the hardest to master.

Conclusion

Recommended flying! Graphics are about as good as you'll ever squeeze out the C64, especially at the speed of sound. Sound is about as good as any other jet game, nothing amazing. But handling wise, this is the *Test Drive* of flight simulators. When you get bored with one plane, try another. Be radical, or be precise, there's situations that demand the best of both.

AFT has got to be one of the best games from Electronic Arts to date. Memories of *Mercenary* came flooding back at first, but eventually this one had the edge. Top class stuff, well done EA!

Plans are already afoot to produce *General Chuck Yeager's Air Combat Trainer*. Not that there's likely to ever be much demand for Air Combat if there was another World War. ■



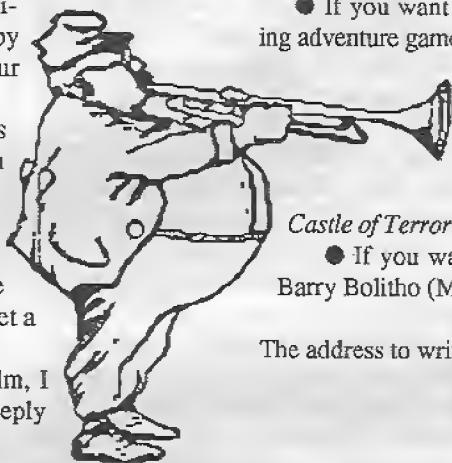
Adventurer's Realm

by Michael Spiteri

HELLO. Welcome to the Realm. What a month it has been! Just when everyone decides to write to the Realm, my printer breaks down. If that isn't bad enough, my Amiga follows shortly. Fortunately, the computer was fixed in time for me to write this article. Hopefully, the printer will be ready by the time you read this to reply to your mail.

So I apologize if you waited months for a reply to your last letter. If you write again, mention that you waited a while for your last reply (or if you didn't get a reply - I know one or two letters got chomped during the machine breakdown), and I will make sure you get a reply within two weeks.

Don't be scared to write to the Realm, I do read all mail, and I try very hard to reply to you all. So, write in:



- If you are stuck in an adventure (precise location is important.)
- If you can help someone who is stuck.
- If you can give general hints/tips/maps.)
- If you want to express your views on anything regarding adventure games.

- If you want to debate on the current topic.
- If you want one of the Realms FREE FREE FREE hint sheets (*Zork*, *Hobbit*, *Lord of Rings*, *Hitchhiker's Guide*, *Castle of Terror*, *Hampstead*)
- If you want to talk about Strategy War Games with Barry Bolitho (Mark the envelope Attn: Wargame Section)

The address to write to is:

Adventurer's Realm
1/10 Rhoden Court,
North Dandenong,
Victoria, 3175

This month in the Realm

This month I've reviewed a top adventure game: The fully Australian made Infocom-lookalike *Paradox Effect*.

Barry Bolitho will be back next issue with many more reviews of wargames, including *Halls of Montezuma* and *Gato*.

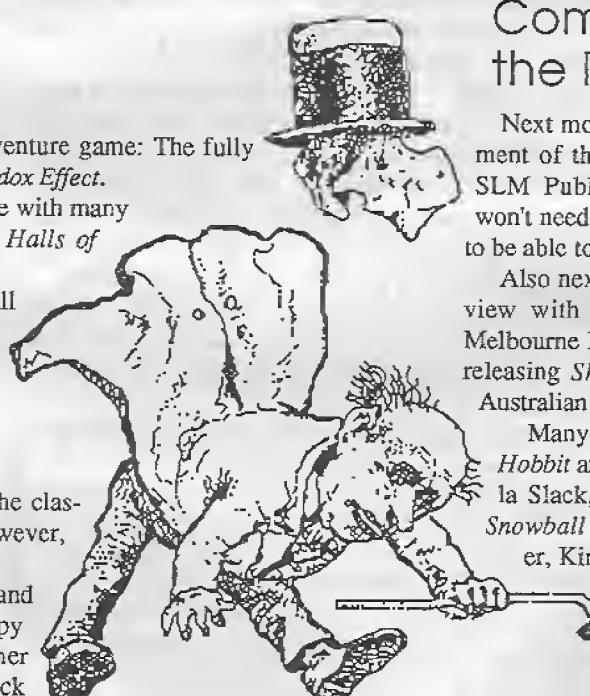
A new amazing debate is open for all to yell at.

Plus all the usual hints and tips. ■

Hottest news this month

Infocom cannot stop churning out the classics. *Beyond Zork* is available now, however, the latest release is called *Borderzone*.

It should be available on the 64,128 and Amiga. *Borderzone* is Infocom's first spy adventure. Also to be released is another mystery adventure tied around a Sherlock Holmes plot. ■



Coming soon in the Realm

Next month is the official announcement of the first Adventurer's Realm/SLM Publications competition. You won't need to be a programming genius to be able to take part.

Also next month we'll have an interview with the programming team at Melbourne House, those responsible for releasing *Shadows of Mordor* onto the Australian public.

Many adventure specials including *Hobbit* and *Adventure Quest* (by Karla Slack, Springwood, NSW) and a *Snowball* special (by Arnold Lancaster, Kirribilli).

So, stay tuned with the Realm - there is big things to come in 88'. ■

Review Review Review

The Paradox Effect

For the Commodore Amiga
Excalibur Software.
Distributed by ECP.

Wow. A text-adventure. Not very often are text-adventures released that aren't made by Infocom. This one is not only text, but it is also 100% Australian made.

The plot is similar to that of the film/game *Back to the Future*. You play the role of Qume Hayes (now there's something original to name your kid) who according to an old fella (imaginatively named John) has invented this super time machine. However, this other fella wants to take the credit for the invention, so he went back in time in an effort to stop the birth of Qume baby.

What he doesn't realise is that by stopping Qume from being born he is in fact preventing the time machine from being invented. So Qume now has to go back in time and stop this other fella while our friend with the exciting name, John, sleeps in the lounge.

The game starts in Qume's study, and from there you can search the house and get all the important objects before starting your quest. If you are not sure what objects are important, don't worry, because the game is stupid enough to tell you.

Anyhow, I played the game for a couple of hours, and in that time I

achieved quite a bit such as getting past Theodore (the pet doggy) and travelling to certain places beyond the present time period. All in a day's work, you know.

I must admit, the game is funny. It is one of those games that likes to pick on the player for doing silly things, like walking into doors and taking objects that don't exist. There is also the occasional gag floating around the place, like the totally irrelevant footnotes and the totally useless Tandy computer. Then there's Albert, the pet mouse that must hide in your shoe or something because he's always appearing wherever you go.

The descriptions are very well written and have good detail. The vocabulary isn't that crash hot but it is sufficient. The game features the 'now standard in all adventures' multi-word command parser. Documentation is brief, simple and to the point - with a few examples thrown in. Packaging is adequate without the frills.

The *Paradox Effect* is a joy to play, and although it doesn't match Infocom, it tries hard. It's good to see that smaller establishments still support the text-adventure; Excalibur are brave to release such a game in a market hounded by pretty graphics and Infocom.

Australia is celebrating 200 years, so if you are feeling patriotic, buy this game - you won't be disappointed. ■

Plot.....	85%
Vocabulary.....	70%
Descriptions.....	80%
Packaging and Presentation....	50%
Documentation.....	50%
Verdict.....	Not guilty of boredom.

New Releases

Coming soon to Australia is a game called *Werewolves in London* for the C64.

Then we have *Assassin*, the third Magnetic Scrolls/Rainbird super graphic adventure, soon to be released for the 64/128 and Amiga. *Arazok's Tomb* is the name of a new graphic adventure for the Amiga. It's very impressive with a not-so impressive vocabulary. ■

Realms debate centre

Now the truth is about to come out about MAZES. Vivienne Slater raised a good point a few months back about the necessity for mazes (or rather the lack of it). So, tell me how YOU feel about mazes in adventure games.

Hopefully, we'll find out whether they really are an essential part of adventure games (as many programmers seem to think so.) ■



Zorker of the month

Yes folks, it's that part of the column. Mrs J. Hall was so terrified of becoming Zorker of the Month that she didn't send in her problems - she took the easy way out and asked for hint sheets.

Runner up is Karla Slack, who I think started playing *Zork II* just to annoy me. ■

Problems Problems Problems

Yes folks, sooner or later you are going to need this part of the Realm. You see, I haven't got solutions to every adventure known to modern man/woman (I'm not sexist). However, there could be someone out there who could help you. Even if it might take six months from the time you send your problem in to the time the solution is published (*suggestion: complain to the editor - everyone else does*).

Calling all helpers. The people below have reached a point where their brain cannot work out problems anymore. Give them help, please.

Brian Bayley of Sturt in SA is having a little problem in a Maze (see what I mean? This line could have been used for displaying a useful hint. But no - a silly Maze problem had to go there first. We really don't need mazes - honestly we don't!) Brian is playing *King Solomons Mines* and is somewhere east from a Zulu Camp. He's also lost.

I haven't even seen or played the game yet and I'm already receiving problems for it. Good Grief!! I am, of course, talking about *Beyond Zork*. Rhys Walkley of Black Rock, Vic is having a problem with the following riddle:

My tines may be long
My tines may be short
My tines air my first report
What am I?

Have a good time solving it, folks! (Haw, Haw, Haw!)

Wolfe the Enchanter is stuck in *Spellbreaker*. Though this time he won't tell me what the problem is. Nothing much we can do at this stage.

David McKinney is still stuck in *The Helm*. How do you excavate? Someone must know how to, because as David correctly put it "people have been asking about problems later in the game!"

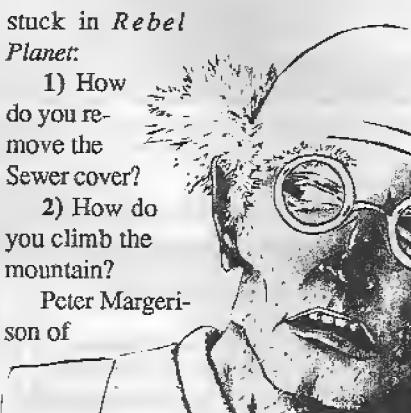
Not sure if I've printed this one before, anyhow it's here in front of me so I'll print it anyway. Mick Turnbull is

stuck in *Rebel Planet*:

1) How do you remove the Sewer cover?

2) How do you climb the mountain?

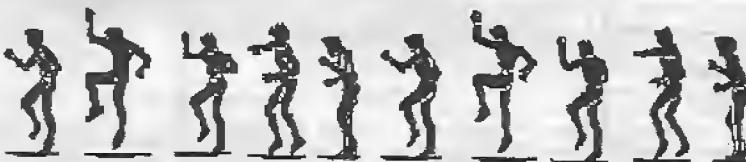
Peter Margerison of



Werribee in Victoria is having pannacles with *Lord of the Rings* and *Shadows of Mordor*.

In the former, where does he go from Merry's house? In the latter, how does he get the raft he made to move?

Finally, in *Dracula Pt 2* he is stuck in the maze (yawn!) and he gets lost in the forest (a maze of sorts - two in one game!) in Pt3. ■



Adventure Chit-Chat

David Taylor is another annoyed person scraping the earth in search of Infocom games. He lives in North Queensland - "I have only seen one Infocom game in North Queensland and that was \$20 above an already high price."

MS: Didn't you know? Infocom games don't sell. That's why they are on the top of the charts, that is why Infocom can still afford to release newer games.

That is why almost all computer outlets are so biased against Infocom games that they assume because they don't sell during the first month or so then they never will! Rather disturbing, isn't it? David, I think mail order is your best bet.

Imagineering are revamping their Infocom games marketing plan and price structure, this means cheaper prices and better availability - ED

David McKinney writes "I am writing to *The Australian Commodore Review* of The Realm"

MS: The ACR realm is the only one in existence. The Home Computer GEM realm disappeared with the magazine!!! ■

Realm Discount Software

If you waltz into the following stores in Melbourne with this article in hand, you will be entitled to a 10% discount off any software in the store.

Toyworld
Swanston St,
Melbourne

Local Computer Shop
Glenhuntly Road,
Glenhuntly

Adventure funnies

Karla Slack discovered something in *Zork II*:

"Type in any four letter word beginning with F or S and see
the reply."

Tony Newmann also submits a few funnies:

"Try hitting the roadie in *Tass Times*"

"Try using four letter words in *Asylum*"

Don't miss out on these great bargains!

Australian Commodore Review Disk Mags Nos 1 to 7

Disk Magazine One

Features:

Forest Raiders - Full machine code shoot 'em up
Machine code paint, border, input and flash routines
Nice Lister - for readable listings on non-Commodore
printers.
Recover II - for recovering deleted files,
and a catalog program - for getting a disk directory
without losing your program
And More...

Disk Magazine Two

Features:

Programs demonstrating 3D graphic plots
A terminal program called Teleport
A tutorial on bits and bytes
Character editor - for designing your own
custom alphabets and graphics
A full demonstration of Electronic Card File
And More...

Disk Magazine Three

Programs:

Hangman	Labyrinth
Calendar	Finance
Typing Practice	Roadblock
Bird Invaders	

Features:

Constructabrix - education and graphic
construction program for younger users
And More...

Disk Magazine Four

Special Issue

Featuring:

Graphic Workshop - a complete design system for
sprites, graphics, and character sets - with tutorials

Also:

Typing Tutor - a complete typing program
Works on errors, counts your speed
And More...

Disk Magazine Five

Our Biggest seller yet...

Featuring:

Utilities for using Newsroom on an MPS 802 plus
printing disk cover with directories, writing signs,
printing Doodle and Printshop pictures and more all
on the MPS 802!

A demonstration of games in the future
And More...

Disk Magazine Six:

Featuring:

Games:	Home Inventory
Bert the Bug	Graphics:
Hangman	Light Fantastic
Demos:	Utilities:
Amiga Pharaoh	1571 Utility
Space Harrier	DIR@828 Disk Filer
Max Headroom	<i>And More...</i>
The Pacer	
Sade	

Disk Magazine No 7 - double sided, with some 128 software too - Featuring:

Utilities: Anti-Isepic, Sledgehammer, Fast Format, Renumber, PS/PM/NR, PS Printer, Graphics Editor.
Other: Joystick Tester, Irish Jokes, Converter, Ultimate Writer, Home Finance, Oscilloscope, Dice Roller, Chord Maker, Dark Forest, Don Martin, Funny, Music Classics. Demonstrations only: Karate Kid II, Thrust Concert, 3D Demo, No More Heros, Recursion. For the 128: Bootmaker 128/64 Utility, Convert Basics utility.

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Please allow two weeks for postage and delivery

Help for troubled adventurers

For: David Newmann & Ben Creek

From: Karla Slack and David McKinney

Game: *The Hobbit* (Bulbous eyes)

Help: To get back along the forest road,
wait twice in each location before moving
on.

For: Ben Creek

From: Karla Slack

Game: *The Hobbit*

Help: From the Great River go E,E,E
and throw a rope across. Pull, get in the
boat and get out. You have to wait for
the magic door to open.

General hints for would be troubled adventurers

Lord of the Rings - From your
garden, go S.W.W.W, wear ring, and you
will find a candle. Light this before entering
Merry's house. (Tip from Alex Harvey)

Hollywood Hi-Jinx - To get the
treasure in the game, you have to get the
creature to breath fire through the glass.

- Fire the cannon to find something be-
neath it.

- Hold the bag before opening the win-
dow.

Mask of the Sun - There are two
masks - only one is real.

- Maze 1 solution: Right-Left-Left-Left

- Maze 2 has no set solution, just move
around about 75 times. (another useless
maze.)

Hitchhikers Guide - At the bugblatter,
say "Arthur Dent"

- There is something under the seat in the
speedboat.

Suspect - Look at the weather, then
at the raincoat

- When alone with BMW open trunk
with crowbar

- Be at the fireplace at 10:53

ZZZZZZZ - Stand on the annoy-
ing reptile.

Asylum - The telephone contains a
magnet.

Until next month

Public Access Message Systems

● = uses Commodore 64 computer ■ = uses Amiga computer □ = uses Commodore PC

Northern Territory System: Outback RCPM Phone: (089) 27-7111	System: Arknet Phone: (02) 8684836 Access: Reg Hours: 00001600 Info: Logon as guest and mail user	System: Coastal Opus BBS Phone: (043) 232275 FIDOnet: 711/430 Access: Reg VA	● System: Dream Time FRP Phone: (02) 935225 Access: Reg VA Hours: 21000700 Daily
New Zealand System: Southern Express! Phone: (024) 877-440 Access: Reg LVA	-	New System System: CoCo Arena Phone: (02) 6465573	System Status: Offline System: Dymock's Computer Bookline
Papua New Guinea System: PNG One Phone: (675) 25-6984	● System: Arrow KBBS Phone: (02) 4512660 Access: Mem VA	System: Comet C64 BBS Phone: (02) 5997342 Access: Mem VA Info: Requires RTERM	● System: Eagle's Nest C64 BBS Phone: (02) 4510535 Access: Mem VA
Tasmania System: Hobart Users BB Phone: (002) 43-5041 FIDOnet: 631/331 Access: Reg VA	System: AUGUR TBBS Phone: (02) 6614739 FIDOnet: 712/302 Access: Reg VA	● System: CommLink BBS Phone: (043) 413135 Access: Mem Reg VA	System: EasyComm Opus Phone: (02) 5589620 FIDOnet: 712/505 Access: Mem Reg LVA
System: Tassie Bread Board Phone: (003) 26-4248 FIDOnet: 631/330 Access: Mem LVA	System: Ausborne (Osborne) RCPM Info: Now Called Moebius Trip	● System: Commodore C64 BBS Phone: (02) 6642334 Access: Mem VA	System: Fantasy C64 Info: Now Called : Dream Time FRP
New South Wales New System System: 2000 and Beyond TBBS Phone: (02) 5226514 Access: Mem VA	System: Australian Pick User's BBS Phone: (02) 6318603 Access: Reg VA	● System: Commodore Pursuit KBBS Phone: (02) 5229507 Access: Mem VA	System: Fido Australia Phone: (02) 9593712 FidoNet: 620/901
System: ABCOM Phone: (047) 364165 FIDOnet: 713/304 Access: Mem VA	System Status:Unknown System: Bert BBS (Videotext) Access: Public	System: CSACE BBS Phone: (02) 5298249 Access: Mem LVA Info: Atari protocol only	● System: Freeze World Phone: (047) 333094 Access: Public Hours: 21300730
System: ACE (NSW) BBS Phone: (02) 5292059 Access: Mem Reg LVA	System: Blackboard BBS Phone: (02) 5261343 Access: Reg VA	New System ● System: Cursor Contact KBBS Phone: (02) 6378131 Access: Reg LVA	System: Galactic Federation Phone: (02) 2335040
System: Alpha Juno BBS Phone: (02) 7741543 FIDOnet: 620/701 Access: Reg VA	New System System: Cesspit Phone: (02) 5437204	System: Cybersoft Opus Phone: (02) 2122261 FIDOnet: 712/202 Access: Reg LVA	System: Galaxy RAPL Phone: (02) 8753943 Access: Mem LVA
System: Amstrad ABBS Phone: (02) 9812966 FIDOnet: 711/903 Access: Reg VA	■ System: Club Amiga BBS Phone: (02) 5216338 Access: Mem LVA	System: Delta Net Phone: (02) 4578281 Access: Public	System: GCS Phone: (02) 5709861
System: Apple Users Group BBS Phone: (02) 4987084 Access: Mem VA	System: Club Mac BBS Info: Now Called : Club Mac Remote Maccess	System: Dick Smiths RIBM Phone: (02) 8872276 Access: Public	System Status: Offline System: Griffith Computer Association
□ System: Aquarius Phone: (02) 6862798	System: Club Mac Remote Maccess System Phone: (02) 731992 Access: Mem LVA	System: Dinga's Den BBS Phone: (02) 8882203 FidoNet: 711/802 Access: Reg LVA	System: HighTech Phone: (060) 251813 FidoNet: 712/201 Access: Reg LVA Info: 147.575 Mhz VK2DGY (Radio) : 1200 bps Amateur Packet Radio
System: ArcoTel BBS Phone: (02) 6833956 FIDOnet: 713/601 Access: Mem	System: Club80 RTRS Phone: (02) 3322494 Access: Mem VA	● System: Down Under KBBS Phone: (02) 6746647 Access: Mem VA	System: Idiom Phone: (02) 4384060 Access: Reg VA
System Status:Online	System: CoCo Connection Phone: (02) 6183591 Access: Reg LVA		

Communications

● System: Illawarra C64 BBS Phone: (042) 618230 Access: Reg VA	System: Nebula BBS Info: Now Called : The Trashcan RAPL	System: Tesseract RCPM+ Phone: (02) 5580129 Access: Reg VA	New System System: AMIGA Opus Phone: (062) 589967 Access: Public
System: InfoCentre BBS Phone: (02) 3449511 Access: Mem VA	System: NetComm Australia Phone: (02) 8873297 FidoNet: 3/113 Access: File Server	System: Texpac Electronic Magazine Phone: (02) 3191009 Access: Mem LVA	System Status: Offline System: Canberra KBBS
■ System: Landover BBS Phone: (02) 5501056 Access: Mem LVA	Hours: Weekdays: 19000900 : Weekends: 24 Hours Info: Software support system for FidoNet	System: The Galactic Federation Phone: (02) 2335040 Hours: Weekdays: 1700 0900 : Weekends: 24 Hours	● System: Commodore Users Group BBS Sysop: James Hacker Phone: (062) 810847
System: Lodestone BBS Phone: (02) 4563264 FidoNet: 711/407	System: New Frontiers CBCS Phone: (046) 256954	System: The Guild FRP BBS Phone: (047) 218625 Access: Mem VA Hours: 2100 0800 Daily	System Status: Offline System: Datalink
System: Manly BBS Phone: (02) 9776820 Access: Reg VA Info: C64 Needs Rterm or Ultraterm	■ System: Newcastle Amiga BBS Phone: (049) 587350 Access: Public	System: The Library Phone: (049) 622931 FidoNet: 711/490 Access: Public	System Status: Offline System: MICSIG
● System: Matrix (Maitland) BBS Phone: (049) 385057 Access: Mem Reg LVA	System: Shore BBS Phone: (02) 9593936 Access: Reg VA Hours: Weekdays: 1800 0730 : Weekends: 24 Hours	System: The Lost Tavern Phone: (02) 9386836	System: PC Exchange RIBM Phone: (062) 581406 FIDOnet: 626/220 Access: Mem LVA
● System: Matrix (Newcastle) BBS Phone: (049) 295279 Access: Mem Reg LVA	System: SMUG Bee RCP/M Phone: (02) 5205181 Access: Reg VA	System: The Trashcan RAPL Phone: (02) 4072729 Access: Mem VA	System: PCUG Bulletin Board Phone: (062) 591244 FIDOnet: 626/229 Access: Mem LVA Info: Access free to members of PCUG
System: Micro Design Lab Phone: (02) 6630151 Access: Reg VA	System: Software Connection Phone: (02) 4512954 FIDOnet: 711/404 Access: Reg VA	System: TNT Shuttle Phone: (02) 3193112 Access: Reg LVA	System: Pharmacy BBS Phone: (062) 923875 FIDOnet: 626/223 Access: Reg Public
System: Micro Mart C Users Phone: (02) 5603607 FidoNet: 712/501 Access: Reg LVA Info: C & dBase User System	System: Software Tools Phone: (02) 4492618 FidoNet: 711/403 Access: Reg VA	System: Triops BBS Phone: (063) 629715 Access: Public Hours: Daily: 2100 to 0900	Queensland System: Access North Queensland Phone: (070) 510566 Access: Reg LVA
System Status: Offline System: Microlink BBS	System Status: Offline System: Sorcerer Users Group	System: Ventura Publisher BBS Phone: (02) 4490463 Info: Ventura Publisher Support	System: AMPAK PBBS/RCPM Phone: (07) 2637070 Access: Mem Reg Info: 147,600 Mhz VK4KJB1 (Radio) 1200 bps Amateur Packet Radio
■ System: Milliway's Phone: (02) 3586272 Access: Reg VA Hours: 21300730 Daily	System Status: Online System: Sorcim microS Phone: (065) 598854 FidoNet: 711/405 Access: Reg Hours: 2100 0800 Daily	New System System: VIP BBS Phone: (02) 3193207 Access: Mem VA	System: AppleQ Node 1 Phone: (07) 2846145 Access: Mem
New System System: Mirage Arcane Phone: (02) 6655970 FidoNet: 712/621 Access: Reg VA	New System System: Steel City Phone: (042) 837247 FidoNet: 712/420 Access: Reg LVA Hours: 1830 2330 Daily	System: Your Computer Phone: (02) 6691385 FidoNet: 712/622 Access: Mem VA	System: Brisbane Commodore User Group Sysop: Colin Canfield Phone: (07) 3956725 Access: Mem VA
System: Moebius Trip Phone: (02) 4397072 FidoNet: 711/408 Access: Mem VA	System: Sydney PC Users RIBM Phone: (02) 2215520 Access: Mem VA	System: Zeta RTRS Phone: (02) 6274177 FidoNet: 713/602 Access: Mem VA Info: C, Unix & Minix Users	System: Brisbane MicroBee UG Phone: (07) 3664833 Access: Mem VA Info: User Works Node #2
System: Mudgee Connection Phone: (063) 721898 FidoNet: 711/630 Access: Public Hours: 21000700	System: Tachyonics Phone: (02) 4382682 FidoNet: 620/402 Access: Reg VA	ACT □ System: ACT Amiga BBS Phone: (062) 589967 FidoNet: 626/221 Access: Reg	System: Cairns & District IBBS Phone: (070) 511360

Communications

System: COM ONE Phone: (057) 625150 Access: Public	System: Midnight Express Phone: (07) 3502174 Info: Userworks Node #8	System: Adelaide MicroBee BBS Phone: (08) 2126569 Access: Reg LVA	New System: Alpha Centauri BBS Phone: (03) 8900512 FIDOnet: 632/348 Access: Reg
● System: Commodore Computer Users Group Sysop: Greg Shea Phone: (07) 3441833	System: Missing Link BBS Phone: (07) 6083094	New System: Aquarium BBS Phone: (08) 2704341 FIDOnet: 680/807 Access: Mem Reg VA	System: AMNET RTDOS Phone: (03) 3667055 Access: Mem VA Info: 147.600 Mhz VK3RPA (Radio) 1200 bps Amateur Packet
● System: Comtel BBS Sysop: Warren Mason Phone: (077) 753636 Access: Mem VA	System: Ozforum Phone: (07) 2094294 Access: Reg Hours: Weekdays: 17000700 : Weekends: 24 Hours	System: Cadzow Fido Phone: (08) 793091 Access: Public	■ System: AmigaLink Phone: (03) 7923918 FIDOnet: 631/324
System: Concomp Phone: (07) 8576000	System: Redcliffe Library Phone: (07) 2830315 FIDOnet: 640/203 Access: Reg VA Hours: W/dys A/H, W/ends 24 Hrs	System: Club Opus CBCS Phone: (08) 2635181 FIDOnet: 680/802 Access: Public	System: Angler's Den Phone: (03) 8764118 Hours: Weekdays: 09002300 : Weekends: 24 Hours
System: CORPLEX Phone: (07) 3501300 Hours: Weekdays: 18000600 : Weekends: 24 Hours	System: Rock Cave BBS Phone: (07) 3951809 Access: Mem VA Info: User Works Node # 4	System: Multiple System BBS Phone: (08) 2555116 Access: Reg LVA	System: Anzugs OPUS Phone: (03) 8870678 FIDOnet: 631/326 Access: Public
System: Educational RBBS Phone: (07) 2663369 Access: Mem VA Info: USERWORKS Node #1	■ System: Sidecar Express BBS Phone: (075) 463252 Access: Mem Reg	System: Nexus Educ Dept BBS Phone: (08) 2432477 Access: Mem System Status: Offline System: Omen V	System: Apple Hackers BBS Phone: (03) 7621582
System: Electric Dreams BBS Phone: (07) 3991322 Access: Mem VA Info: User Works Node # 5	System Status: Offline System: SoftTech	System: Oracle PCNetwork Phone: (08) 2606222 FIDOnet: 680/804 Access: Mem LVA	System: Atlantis RBBSPC Phone: (03) 2776824 Access: Public
System: Fix BBS Phone: (07) 2855814	System: Software 80 BBS Phone: (07) 3697103 Access: Reg VA Hours: Weekdays: 19300800 : Sat 1430Mon 0800	● System: S A C BBS Phone: (08) 3870249 Access: Mem LVA	System: AUSOM System #1 Phone: (03) 8771990 Access: Public
System: Focus BBS Info: Now Called : Fix BBS	System: Sun City Opus Phone: (077) 741552 FIDOnet: 640/702 Access: Mem LVA	New System: Sorcerer Users Group BBS Phone: (08) 2606576 Access: Mem LVA	System: Ballarat C.A.E. Phone: (053) 339285 Access: Reg VA
System: Futex C64 Phone: (07) 2832034	System: Tomorrowland RMSD Phone: (07) 3710944	System: The Electronic Oracle TBBS Info: Now Called : Oracle PCNetwork	System: Bayside Phone: (052) 531110 FIDOnet: 630/313 Access: Reg Public
System: Greenhorn Experimental Phone: (07) 3455010 FIDOnet: 640/301 Access: Reg VA	● System: Toowoomba RBBS Phone: (076) 301762 Access: Mem Reg LVA Hours: Daily: 2100 to 0630	System: The IDN Board Phone: (08) 3522252 Access: Reg LVA Hours: Weekdays: 17300900 : Weekends: 24 Hours	System: Big Tedd's Fido BBS Phone: (03) 5096067 Hours: 21001800 Daily
System Status: Offline System: HiTech CBBS	New System: Youth Extension Service (Toowoomba) Phone: (076) 391790 FIDOnet: 640/302 Access: Public Hours: Weekdays: 16000730 : Weekends: 24 Hours	System: The Olympic Board Phone: (08) 2654232 FIDOnet: 680/801 Access: Public	System: Brainstorm BBS Phone: (03) 7587088 FIDOnet: 631/322
System: Kangaroo Point TAFE Phone: (07) 3931763 Hours: Weekdays: 09002200 : Weekends: 24 Hours	South Australia ■ System: Adam Link BBS Phone: (08) 2702713 Access: Reg LVA	Victoria System: ABE Phone: (03) 2883599 Access: Public	System: C64 BBS Phone: (03) 4894555 Access: Public
System: Mackay High School Phone: (079) 514815 Access: Public Hours: Weekdays: 16000730 : Weekends: 24 Hours	System Status:Offline System: Adelaide Micro User Group BBS	System: ACES High Phone: (03) 8782918 Access: Public	Sysop: George Tsoukas Phone: (03) 3866019
System: MarlinCoast BBS Phone: (070) 517220 FIDOnet: 640/501 Access: Reg VA			System: Crystal Palace Phone: (03) 7251923
			System: Crystal Symphony BBS Phone: (03) 8744176 Hours: 23000600 Daily

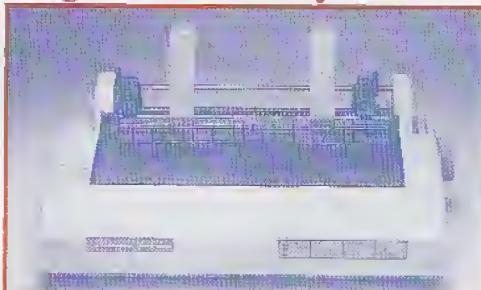
Communications

System: Custom Programming OPUS Phone: (03) 8483331 FIDOnet: 632/340 Access: Mem VA	System: MBUG Australia Inc Phone: (03) 8821571 Access: Mem	System: Pegasus Phone: (03) 7254948 FIDOnet: 630/309	System: The Magic Pudding Info: Now called The Village Idiot
System Status: Offline System: Cycom	System: Melbourne Atari BBS Phone: (03) 8915927 Hours: Weekends ONLY	System: Proergy Info: Now Called : The Dreamscape BBS	System: The NATIONAL CBCS Phone: (03) 256904 FIDOnet: 630/301 Access: Public Info: FIDOnet Region 50 Coordinator
System: DECUS Phone: (03) 625806 Access: Mem VA	System: Melbourne Data Exchange Phone: (03) 5616556 FIDOnet: 631/321 Access: Reg VA	System: Public Resource #1 Info: Now Called ACES High	System: The Real Connection Phone: (03) 2880331 Access: Public
System: Down Under Software Amiga/IBM Phone: (03) 4298079 FIDOnet: 630/306 Access: Public	System: Melbourne PIE Phone: (03) 8775568	System: Sams Phone: (03) 5631117 FIDOnet: 630/305 Access: Public	System: The Software Bank Phone: (03) 8201632 FIDOnet: 632/342 Access: Reg LVA
System: East Suburb Eighty User Group Phone: (03) 8194246	System: MICROLINK	System: Software Bank Phone: (03) 8201632 FIDOnet: 632/342 Access: Reg LVA	System: The Time Warp Phone: (03) 8131663 Access: Reg
System: East Suburb User Group Info: Now Called East Suburb Eighty User Group	System: Midnight Frog BBS Phone: (03) 5961589 FIDOnet: 630/303 Access: Public	System: Sorcerer & CPM Users RBBS Phone: (03) 7545081 Access: Mem Reg VA	System: The Twilite Zone Phone: (03) 5620686 Access: Reg
System: Eastcomm BBS Phone: (03) 2880775 FIDOnet: 630/312 Access: Reg VA	System: Mike's Bullboard	System: Sotec BBS Phone: (03) 8908166 Access: Reg VA Hours: Weekdays: 17000900 : Weekends: 24 Hours	System Status: Offline System: The Village Idiot
System: Eastwood R/ZSYS & PBBS Phone: (03) 8704623 FIDOnet: 632/343 Access: Reg VA	System: MINNET BBS Phone: (054) 413013 Access: Public	System: Tardis BBS Phone: (03) 8593109 Access: Public	System: The Ultimate C64 Phone: (03) 7355551
System: Electronic CrossOver BBS Phone: (03) 3675816	System: Motel International Phone: (03) 5099611 Access: Public	System: Telegraph Road BBSPC Phone: (03) 7436173 Access: Reg LVA	System Status: Offline System: ThunderNet Amiga
System: Engbase CBCS Phone: (03) 296336 FIDOnet: 631/325	System: MouseText Phone: (059) 425528 Hours: 10002200 Info: Videotext Compatible ONLY	System: Teletex Connection Phone: (03) 4706827 Hours: 06002200 Info: Videotext Compatible ONLY	System: VIDEOTEXT/4000 Phone: (03) 7413295 Hours: 06002300 Info: Videotext Compatible ONLY
System: Entropy BBS Phone: (03) 5839747 FIDOnet: 632/344 Access: Public	System: Omegatex Videotex Service Phone: (052) 221670	System: TERMICOMNET	● System: Yarra Valley BBS Sysop: Frank Conner Phone: (059) 643126 Access: Mem VA
System: EXCALIBUR64 RCP/M Sysop: Maurice Copeland Phone: (057) 831964 Access: Public Hours: Weekdays: 0812 1623 : Weekends: 24 Hours	System: Osborne Australian BB Phone: (03) 8904096 Access: Reg LVA	System Status: Offline System: The Deepseas BBS	System: Yarra Valley BBS Phone: (03) 7361814 Access: Mem VA Hour : Daily 00:0106:00
System: Gippsland MailBus Phone: (051) 277245	System: Outer Limits BBS Phone: (03) 7256650	System: The Dreamscape BBS Phone: (03) 5620489 Hours: 07002359 Daily	System: Zoist Phone: (03) 4672871
System Status: Offline System: Harbour64	System: Pacific Island Phone: (03) 8902174	System: The InfoSource BBS Phone: (03) 3971165 Access: Mem VA	Australian PAMS Listing <i>courtesy Prophet Computer Services, PO Box E41, Emerton NSW 2770</i>
System: Maxitel BBS Phone: (03) 8826188	System: PC Connection IBBS Phone: (03) 5283750	System Status: Offline System: The Inner Sanctum BBS	
	System: PC User BBS Phone: (03) 8195392 FIDOnet: 631/323 Access: Public	New System: The Krome Philes CBCS Phone: (03) 7430324	
	System Status: Offline System: PCOasis Ssystem	System: The MACBOARD Phone: (03) 4359152 Access: Public	

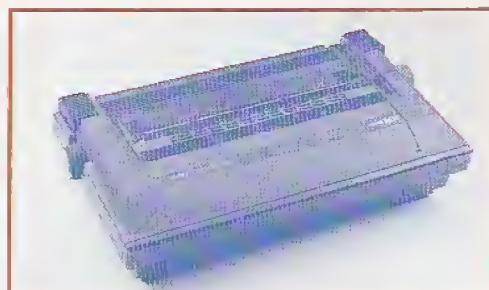
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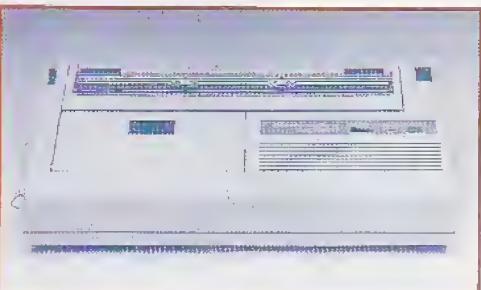
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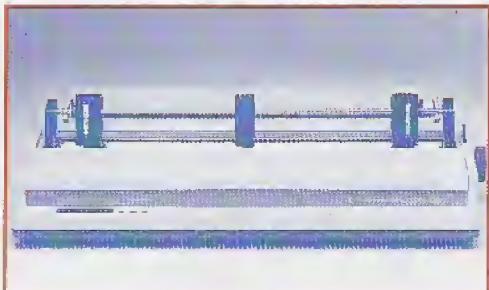
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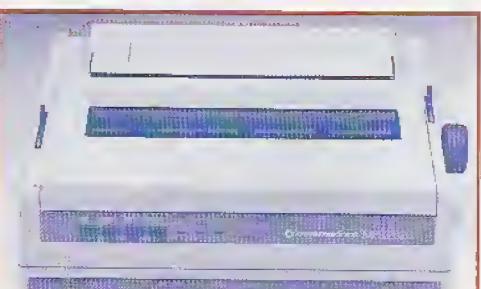
Commodore DPS 1101 Daisy Wheel



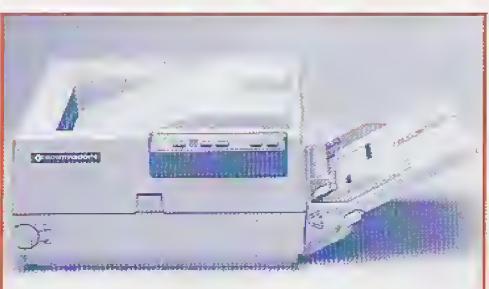
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